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ABSTRACT

This volume contains peer-reviewed research articles and abstracts based on papers presented at the sixth biennial research symposium of the Coalition for Education in the Outdoors. Introductory materials include the editors' introduction, "Milestones in Outdoor Education" (Anderson B. Young), and a tribute to the founder of the Indiana University Bradford Woods Outdoor Education and Camping Center--"Reynold E. Carlson: A Distinguished Pioneer in Outdoor Education" (Joel Meier). The 14 articles are: "Effective Practices and Participant Outcomes for Youth: Inclusive Camps and Outdoor Schools" (Steve Brannan, Joel Arick, Ann Fullerton); "Qualitative Outcomes for Youth Who Participate in Inclusive Programs: A Multi-Case Analysis across 14 Camps and Outdoor Schools" (Ann Fullerton, Steve Brannan, Joel Arick); "The Adventure Model: A Replication Study To Determine if Different Adventure Skills Support the Model" (Ken Gilbertson, Alan Ewert); "Using Means-End Theory To Understand the Outdoor Adventure Experience" (Marni Goldenberg, David Klenosky, Leo McAvoy, Tom Holman); "Leader Integration Competencies and Staff Training in Adventure Programs" (Leo McAvoy, Jim Roehl, John Rynders); "An Analysis of Outdoor Leaders' Ethics Guiding Decisions" (Denise Mitten); "Meta-Analytic Research on the Outcomes of Outdoor Education" (James T. Neill); "Multidimensional Self-Concept and Outdoor Adventure Education with Adolescents" (Timothy S. O'Connell); "If the Dress Fits, Wear It: Uncovering Meaning in Gender Stereotyping in an Australian Outdoor Education Program" (Katherine J. Pinch); "Difficulty and Ability: Staff Member Perceptions of Seasonal Staff Training" (Gwynn M. Powell, Robert D. Bixler, Deborah M. Switzer, Karen P. Hurtes); "Motivations of Elderhostel Participants in Outdoor Adventure Programs: A Life Cycle Perspective" (Deborah M. Sugerman); "The Relationship of Motivation Factors to Level of Development in Outdoor Adventure Recreationists" (Sharon L. Todd, Lynn Anderson, Anderson Young, Dale Anderson); "Developing Outdoor Leaders: Paul Petzoldt's Perspective" (Mark Wagstaff, Christine Cashel); and "Outcomes of Camping: Perceptions from Camper Focus Groups" (M. Deborah Bialeschki, Amy Krehbiel, Karla Henderson). Abstracts of eight additional papers are presented. (SV)

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RESEARCH IN OUTDOOR EDUCATION

VOLUME 6

M. DEBORAH BIALESCHKI
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Editors

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The Coalition for Education in the Outdoors initiated a Research Task Force in 1990 with the purpose of supporting the conduct of research in the field and dissemination of the results. The symposium at Bradford Woods and these *Proceedings* offer evidence of the success of this task force. At the first symposium in 1992, there was general agreement that the symposium be a regular occurrence. The 2002 Symposium and these *Proceedings* are indicators of the Coalition's continued support of research in outdoor education. Information on future events will be available through the Coalition office.

RESEARCH IN OUTDOOR EDUCATION

VOLUME 6

A PEER-REVIEWED PUBLICATION OF SCHOLARHIP FIRST PRESENTED AT THE
COALITION FOR EDUCATION IN THE OUTDOORS
SIXTH BIENNIAL RESEARCH SYMPOSIUM

JANUARY 11-13, 2002
BRADFORD WOODS, INDIANA

The Coalition for Education in the Outdoors is a network of institutions, organizations, agencies, centers, businesses, and associations linked and communicating in support of the broad purposes of education in, for, and about the outdoors. The Coalition assists in identifying the needs of its affiliates in meeting their various constituent needs, as well as advancing the mission of outdoor education globally.

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RESEARCH IN OUTDOOR EDUCATION
VOLUME 6

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Editors' Note: Special thanks to the many people who assisted in the editorial review process. Your contributions were invaluable to the success of this publication.

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Editors' Introduction and Acknowledgements

Some readers of this volume were expecting the title to contain the word "proceedings." Others, seeing "Volume 6" in the title, will wonder, "Where are the first five volumes?" Let us explain. All of the research papers published in this volume were first presented at the Coalition for Education in the Outdoors (CEO) Sixth Biennial Research Symposium. Articles from the first five CEO symposia were published as "proceedings." While the word "proceedings" rightly signaled that the papers were associated with a gathering of scholars (something we wanted to convey) the word "proceedings" conveyed to many that the articles were accepted for publication without review (something we did not want to convey). Articles appearing in this volume and earlier CEO "proceedings" have always passed two levels of blind review—one a screening of abstracts to be accepted for the symposium, the other a screening of articles submitted for the resulting publication. The CEO Research Committee wanted the name of our publication to reflect better the rigor and efforts of the authors and reviewers. *Research in Outdoor Education, Volume 6,* is the name the Committee chose.[1]

A juried publication takes support and help from many different people. We are fortunate to have a strong Research Committee to guide the process and provide input on the conference as well as the publication. Our sincere thanks goes to the panel of reviewers who gave their time and expertise to provide valuable feedback to the authors. We also appreciate the thoughtfulness with which authors carefully considered the reviewers' suggestions and strengthened manuscripts, which resulted in much needed documentation to issues within the field of outdoor education. We believe the strength of the manuscripts found in this publication is evidence of the value and rigor of the peer-review process. We are also happy to publish many of the abstracts of the papers presented at the conference. While the abstracts were not refereed, their contribution to the field cannot be ignored. We hope that you also enjoy the special tribute to Rey Carlson written by Joel Meier. How fitting that our symposium was held at the same time as the remembrance of the 100th birthday of this well-loved icon of outdoor education!

We want to acknowledge the help and support of faculty and staff in North Carolina and New York. From the Department of Recreation and Leisure Studies at the University of North Carolina at Chapel Hill, graduate assistants Brendan Moore and Becca Bregel were helpful in the review phase of the process and learned a lot about the "behind the scenes" work of publishing. Debra Hill, departmental secretary, was a lifesaver in formatting the articles into a single volume. We also thank SUNY Cortland and its Department of Recreation and Leisure Studies for its continuing support of the Coalition for Education in the Outdoors and its endeavors. In this time of fiscal tightening, we find it hopeful that institutions still prioritize and support the production of scholarship such as these proceedings.

M. Deborah Bialeschki
Karla A. Henderson
Anderson B. Young
Robert G. Andrejewski

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[1] Copies of the first five "volumes" (proceedings) are still available from the Coalition for Education in the Outdoors. Contact http://www.outdooredcoalition.org

PREFACE: MILESTONES IN OUTDOOR EDUCATION

Anderson B. Young, CEO Research Symposium Coordinator
State University of New York College at Cortland

It has happened every other January for a decade. People travel from all corners of North America and from overseas to the Coalition for Education in the Outdoors (CEO) Research Symposium at Indiana University's Bradford Woods. For this, the sixth such event, over 60 people made the trip, twice the number attending 10 years ago. Half were new to the event; half had done this before. What drew these people together was a commitment to building the empirical, theoretical, and philosophical bases of education in the outdoors and the realization that the Coalition for Education in the Outdoors Research Symposium is a genuinely unique opportunity to share research findings and to talk extensively and meaningfully with other outdoor education researchers. At no other outdoor education-related conference is the focus exclusively on research. At no other conference do we find such a mix of academic disciplines (e.g., forestry, social work, psychology, leisure studies, education, etc.).

Providing this kind of service is what the Coalition for Education in the Outdoors was created to do. CEO was established in 1987 as a means of improving communication among those involved in outdoor and environmental education. It was the product of a series of informal meetings with leaders of various outdoor-education-related organizations that culminated in a founders' planning retreat held at SUNY Cortland's Outdoor Education Center on Raquette Lake. The founders had two major goals for CEO. First, recognizing that the proliferation of outdoor related organizations precluded anyone from keeping track of all the conferences, publications, and other resources, CEO was created to be an information clearinghouse. CEO's quarterly publication, *Taproot*, is regarded by many as the best way to learn what ACA, WEA, NAAEE, AEE, and other organizations are doing, what new resources have been published, and other valuable information. Second, recognizing that research needs of the field (and the needs of researchers) were insufficiently supported by any national and state organizations, the CEO founders established a research committee to identify ways CEO could strengthen the research foundations of our field. These biennial symposia have been the principal initiative of the CEO Research Committee, and the results have been impressive.

Ten years after the first symposium, our mission remains the same: we seek to advance the empirical, theoretical, and philosophical bases of education in the outdoors. To accomplish that mission, these symposia have had three subordinate aims. First, the symposium marks an opportunity for scholars to present their work to one another and, through this volume, to the larger community of outdoor educators. The Sixth CEO Symposium featured a record 25 research papers on topics ranging from ethics and moral development to youth development to summer camp program outcomes and more. Once again, we were treated to two substantial literature reviews. Many of those papers appear in this publication. Second, each symposium is designed to build a sense of community among those interested in outdoor education research and scholarship. The atmosphere is cordial, informal, and highly interactive. Over and over again the evaluations noted the "friendly, supportive atmosphere," the "opportunity for formal and informal discussions," the "wonderful graduate students and new scholars," and the "chance to meet many of the most experienced and distinguished researchers in our field." Third, the symposium provides a forum where participants can address issues and explore alternative means of pursuing their research and scholarly aims. People form research partnerships, learn of alternative instruments and new resources, and generate new research ideas.

Bradford Woods has been the venue for all six CEO symposia. Over the years, Gary Robb, Stuart Sheppley, and their staff have made it so easy for us to be there. This center has a well-deserved reputation in our field. To nearly everyone involved with organized camping, environmental education, challenge education, accessibility and inclusive recreation, or other aspects of outdoor education, the name "Bradford Woods" is synonymous with leadership and excellence.

Our symposium coincided with a milestone celebration in the history of Indiana University's Bradford Woods. This year marked the 100th anniversary of Reynold Carlson's birth. The late Dr. Rey Carlson was instrumental in the establishment of Bradford Woods as an outdoor education center. Of course, Rey Carlson gave us much more than Bradford Woods, and Joel Meier has provided this publication with a nice piece about Carlson's life and his contributions to outdoor education, environmental interpretation, organized camping, and outdoor recreation. To celebrate Rey Carlson's life and work, Indiana University hosted an extraordinary banquet during the symposium. We were joined by some of Dr. Carlson's colleagues, family, friends, and current Indiana University faculty. Doug Knapp served as master of ceremonies, and Gary Robb and Tom Rillo spoke about Dr. Carlson. We also saw the premier of a video recounting the life and work of this legend in our field. It was an evening everyone will long remember.

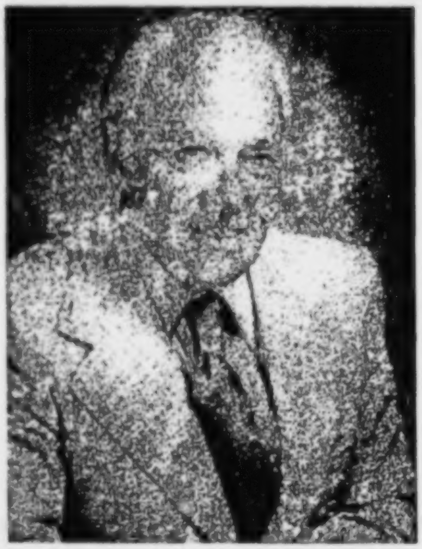
I have had the privilege of being a cofounder of CEO and an organizer of its six research symposia. I am especially pleased with the success of this research initiative. It has evolved nicely. It has doubled in size, but retained the small, informal character that attendees value so much. It has attracted more presenters and published more high-quality papers each time. These resulting publications (formerly called proceedings) get a lot of handling by graduate students and others, and the articles are often cited in our literature. However gratified I am by this success, I am keenly aware that this event works because a wonderful group of people makes it work. It all begins with the CEO Research Committee. I couldn't ask for a more talented, dedicated, or responsive committee. To Deb Bialeschki, Camille Bunting, Chris Cashel, Alan Ewert, Mike Gass, Karla Henderson, Leo McAvoy, and Gary Robb go heartfelt thanks for all the help this year and through the years. The staff at Bradford Woods never ceases to amaze me. This year was no exception. Special thanks go to Ricardo Moraes, who coordinated all the arrangements. He was unflappable in his handling of the "little things" that came up and unflagging in his attention to detail and courtesy. This event would not happen without the ongoing support of the State University of New York at Cortland, especially the Department of Recreation and Leisure Studies and CEO Director, Charles Yaple. Finally, the presenters, authors, and others attending the symposium deserve thanks for filling the program with solid research and filling our time together with stimulating conversations, ample smiles, and a good amount of laughter.

This Sixth CEO Research Symposium was an occasion to note milestones—the 100th anniversary of Rey Carlson's birth, the 15th year of CEO, the 10th anniversary of the CEO Symposium, and the 100th article printed in the resulting publication. These numbers are nice to note, and they reflect, however indirectly, the progress of our field as well as the march of time. These numbers prompt me to look back over my years in the field. Peering through bifocals, I note astounding progress in the volume and quality of research. What was simply a paragraph in a 1976 research overview would today be the focus of the entire review of literature. The knowledge and research expertise of today's graduate students and new scholars are impressive. Well that it is, because the agenda is long. Despite the progress, there are too many gaps and too little follow up in our research. But noting the progress gives hope for the future. Not overnight, but over time, we know more and we improve practice.

In the interest of continuing this progress, planning for the Seventh Biennial CEO Research Symposium is already under way. So collect some data, volunteer to help with planning, or simply plan to attend the next one. January 2004 will soon be here.

REYNOLD E. CARLSON:
A DISTINGUISHED PIONEER IN OUTDOOR EDUCATION

Joel Meier, Professor
Indiana University



Long before it was a popular cause in this country, this man was concerned about the environment. His particular interest was in the relationship of human beings to the environment and the meaningful utilization of natural resources to sustain a high quality of life. He was committed to creating outdoor recreation experiences, protecting basic ecological balance, and giving dynamic leadership to the international camping movement.

Professor Reynold E. Carlson earned his A.B. and M.A. degrees at the University of California at Berkeley. He was a high school teacher, a principal, and a naturalist with the National Park Service before he joined the staff of the National Recreation Association in 1936. His work with the Park Service and with the National Recreation Association brought him national acclaim as a champion of conservation practices. He joined the faculty of the School of Health, Physical Education and Recreation at Indiana University in 1947, and he served the Department of Recreation and Park Administration with distinction as a teacher until he was named professor emeritus in 1972. From 1962 to 1966 he also served as the chair of the department.

During his tenure at IU, Professor Carlson supervised the development of the outdoor recreation education curriculum and the development of Bradford Woods Outdoor Education and Camping Center. He was also instrumental in the establishment of Camp Riley and the American Camping Association Headquarters at Bradford Woods.

In the early 1950s, Professor Carlson first visited Bradford Woods, the 2,300-acre property given to Indiana University by the Bradford brothers. At the time of his visit, he found second-growth timber and a few deserted structures in need of repair. However, he saw in the site land worthy of development and was able to persuade University officials and leaders of the Riley Memorial Association that indeed the land had great potential. Professor Carlson invested hundreds of hours in preparing a master plan for land use, and fashioned educational programs that have become models for outdoor learning facilities throughout the United States and the world.

Through his vision and efforts, the Indiana University Bradford Woods Outdoor Education and Camping Center became a reality, housing five resident camps, the national headquarters of the American Camping Association, a year-round workshop facility, and a comprehensive outdoor education program for school youth.

Under Professor Carlson's watchful eye, the Bradford House was renovated into a learning resources center that has become an integral part of Indiana University's Outdoor Education Program. On Professor Carlson's 80th birthday, the Bradford Woods Learning Resources Area was dedicated in his name in honor of the unique, outstanding leadership he had given to the university.

Bradford Woods is the most visible monument to Rey Carlson's pioneering spirit, but there are also hundreds of students who, through their work in recreation and park service, are monuments to his extraordinary teaching skills. In 1963 he received Indiana University's highest recognition for his teaching—the Frederick Bachman Lieber Award for teaching excellence.

Rey Carlson dedicated his life to the advancement of leisure professions as a consultant, naturalist, author and speaker. He served as president of the American Camping Association, was cofounder of the Association of Interpretive Naturalists, and founding member of the Academy of Leisure Sciences.

In addition to his distinguished career as a teacher and his leadership in a number of professional associations, Professor Carlson gave outstanding service to the citizens of Indiana as a highly respected member of the Advisory Council of the Department of Natural Resources. He had a clear perception of public policy implications and was acknowledged as an expert in the management of the state's natural resources.

Professor Carlson received distinguished service awards from the American Camping Association, the National Recreation and Park Association, the National Association of Interpretive Naturalists, the Great Lakes Park Training Institute, the American Recreation Society, the Society of Park and Recreation Educators, and the Girl Scouts of America. He was an elected member of the National Academy of Leisure Sciences, and the American Recreation Society. He was active in a vast number of professional organizations whose leaders constantly sought his counsel. In recognition of his outstanding contributions to the field of outdoor education, he received honorary Doctor of Humane Letters Degrees from both Springfield College and Indiana University.

When Reynold Carlson retired in 1972, his colleagues, close friends, and former students spearheaded an effort to establish a Carlson Distinguished Lecture Endowment Fund in Indiana University's Foundation in honor of this pioneer of the outdoor recreation/education movement. The purpose was to fund a lecture series "to help perpetuate the excellent program in outdoor recreation Dr. Carlson had built" in his 25 year tenure at the University. To make an enduring tribute to Rey's ideals, contributions were directed to a special endowment fund at Indiana University Foundation with interest income earmarked to support the lecture series.

The Department of Recreation and Park Administration also commissioned noted wildlife artist Charles T. Crume, Jr. to prepare an original oil, *The Pileated Woodpecker*, in honor of Rey and his wife, Ruth Carlson. At the time, Mr. Crume was chief naturalist of Bernheim Forest Nature Preserve in Kentucky. The original oil was presented to the Carlsons at IU's 1972 Lebert H. Weir banquet. Full-color limited edition collector prints were made available to all contributors to the endowment.

In the literature prepared for the endowment, Rey was described as "master teacher, respected author, philosopher, world traveler, gifted speaker, dedicated professional, and sensitive human being…an inspiration to all who have had the privilege of knowing him."

Since the inception of the Reynold E. Carlson Distinguished Lectureship Endowment, each year an outstanding leader from the field of outdoor recreation/education is selected to present the Carlson Lecture, and this special endowment fund supports the lecture series. Many outstanding individuals have served as Distinguished Lecturers, including outdoor education pioneers such as George Donaldson, Paul Petzoldt, Donald Hammerman, Phyllis Ford, Betty van der Smissen, Clifford Knapp, Camille Bunting, Daniel Dustin, Alan Ewert, and others too numerous to mention.

Dr. Carlson died February 19, 1997 in Bloomington, Indiana at the age of 95. He was indeed a very special person. Perhaps no one else has so significantly touched the lives of faculty, staff, and students in the field of parks and recreation at Indiana University. Rey was recognized as a dynamic leader in the areas of outdoor recreation/education, conservation, and organized camping, but most of all—whether in the classroom or the field—he was truly a master teacher who had the unique ability to excite the mind, light fires, and stimulate educational interests in every student. His genuine and caring warmth, kind and gentle debonair, and wonderful mentoring technique infected everyone with his love of the great outdoors.

The right man in the right place at the right time, Rey Carlson gave much and received, in return, the respect and admiration of all who had benefited from his inspiration.

EFFECTIVE PRACTICES AND PARTICIPANT OUTCOMES FOR YOUTH: INCLUSIVE CAMPS AND OUTDOOR SCHOOLS

Steve Brannan, Joel Arick, and Ann Fullerton
Portland State University

INTRODUCTION

As citizens with disabilities have increasingly been included in all forms of community life in our nation during this last decade, a need has grown for increased knowledge and understanding about inclusive outdoor programs serving youth. Inclusion generally refers to accommodating persons with disabilities in programs serving the general population. One effort toward meeting this need is the National Inclusive Camp Practices (NICP) project, a three-year nationwide study of effective practices and participant outcomes for youth attending organized outdoor programs that employ inclusive practices. This research project investigated resident camp and outdoor school programs and employed validated instrumentation to help determine the effects of inclusive practices on the growth and development of youth with and without disabilities (Brannan, Fullerton, Arick, Robb, and Bender, in press).

IMPORTANCE

This study is also an extension of the authors' prior nationwide research, the National Camp Evaluation Project (NCEP), which used validated instrumentation to help substantiate the positive impact of specialized resident camp programs on youth and adults with disabilities (Brannan, Arick, and Fullerton, 1998). Strong agreement has existed for years among professionals in various disciplines attesting to the wide range of benefits that organized outdoor programs contribute to the growth and development of persons with varying disabilities (Austin, 1980; Brannan, 1981; 1991; Cassidy, 1982; Dattilo, 1987; Frant, Roland, and Schempp, 1982; Havens, 1985; Hourcade, 1977; James, 1987; Robb, Havens, and Witman, 1983; Sugerman, 1988).

Although personal, social, leisure, outdoor skills, and other outcomes have been widely reported for persons with disabilities as a result of their participation in organized outdoor programs (e.g., camping, outdoor education, adventure programs), carefully designed, systematic research using validated instrumentation to determine the effects of outdoor programs are often lacking to support such claims. Robb and Ewert (1987) reported that gains in the affective domain (e.g., self-esteem, valuing, interests, social skills) represent a common area of benefit for persons with disabilities participating in challenging outdoor programs, but they and other researchers indicated that instrumentation designed to evaluate and objectively substantiate the impact of outdoor programs on the growth of persons mildly to severely impaired is extremely limited (Brannan, Rillo, Smith, and Roland, 1984; Compton, 1984; Ewert, 1988; Howe, 1984; Iso-Ahola, 1988; Schleien and Yermakoff, 1983; Witt, 1988).

The overwhelming majority of research on evaluating outdoor programs for persons with disabilities has been conducted in specialized camps and related outdoor recreation programs designed for persons with disabilities. Of particular importance today is that the implementation of inclusive practices in traditional (mainstream) camp and outdoor/environmental education programs in our country is a relatively new development and, as such, is still largely unrealized and under researched (Brannan, Arick, Fullerton, and Harris, 1997; McAvoy and Schleien, 2001; Smith, Austin, and Kennedy, 2001).

THE NICP STUDY

In planning for this research in 1997, the NICP research team partnered with the American Camping Association to conduct a nationwide survey to identify and study the general nature of mainstream (i.e., traditional) resident camps and outdoor schools whose administrators indicated they operate inclusive programs (Brannan et al., 1997). Camps and outdoor schools were defined as inclusive programs if campers/students with and without disabilities attended the same session(s), were members of the same cabins groups or units, and participated together in all camp activities. The ACA survey identified 31 resident camps across the country that primarily served campers without disabilities and also mainstreamed campers with disabilities into their programs (i.e., operated inclusive programs).

The ACA survey results helped guide the selection of 12 resident camps and 2 outdoor school sites in 12 states that participated in the NICP project. In addition to being inclusive, site selection for participation in NICP's research was based on (a) camp director/ administrative commitment to inclusive practices and program development, (b) a desire to communicate the benefits of inclusion to the camping and education professions, and (c) an interest in participating in future research on camper/student outcomes. The NICP research team studied the 14 outdoor camps and outdoor schools over the 2-year period of 1998-1999. The researchers employed validated instrumentation to help determine the effects of their inclusive practices on the development of youth with and without disabilities who participated together in the programs.

SUBJECTS

Sixty subjects were selected at each site between the ages of 6 and nineteen. First, thirty subjects with disabilities that represented a variety of disabling conditions (from mild to severe conditions), and reflected the different youth with disabilities who attended the programs, were selected. Then, for each of these subjects, a second subject without disabilities of the same sex, approximate age, and cabin group assignment was identified as another subject. A total of 742 youth from 12 resident camps and 2 resident outdoor schools across 12 states participated in the study (see Table 1). A similar number of boys and girls were included in the study, the majority of which were of elementary and middle/junior high school age with at least 1 year of prior camp experience. Of the total number of youth researched, 372 subjects were disabled and 370 subjects were nondisabled.

Youth with disabilities represented a wide range of disabling conditions and levels of functioning. The majority of subjects, 59.4 %, were mildly impaired with mild mental retardation, speech impairment, learning disability, or attention deficit/hyperactive disorder. Other disability groups included 13.5% of subjects with autism or emotional disturbance, 11.0% of subjects with a physical/orthopedic or health impairment, 9.3% of subjects with a vision and/or hearing impairment, and 6.8% of subjects with moderate-to-severe mental retardation.

INSTRUMENTS

The NICP study team used validated instruments to collect quantitative data on all campers/students and qualitative data on selected participants at each site. The study employed varied methods such as objective assessments, video samples, and individual case studies. Only the quantitative instruments and results are presented in this paper. Detailed information on the quantitative measures, their reliability and validity, and the total results of the research to include a qualitative component is reported in Brannan, et al. (in press); qualitative results are also in Fullerton, Brannan, and Arick (in press).

Five validated instruments were used to collect quantitative data for the NICP study. The instruments were carefully developed and examined for reliability and validity to ensure their adequacy for measuring camper/student skills, etc. in outdoor programs. The development of all instruments was accomplished with assistance from national experts, parents, resident camp and outdoor school directors and staff, counselors, therapeutic recreation specialists, outdoor/environmental education consultants, spe-

TABLE 1
Camper/Student Population

1998-1999 Camper/Student Information Summary: All 14 Sites
Total N = 742

	Disabled (N=372)		Non-Disabled (N=370)	
	N	%	N	%
Age (N=737)				
6-11.9 yrs.	202	54.9	242	65.6
12-19 yrs.	166	45.1	127	34.4
Gender (N=739)				
Male	198	53.2	188	51.2
Female	174	46.8	179	48.8
School Setting (N=736)				
elementary	204	55.1	206	56.3
ms/jr.high	121	32.7	137	37.4
high school	27	7.3	17	4.6
other[1]	18	4.9	6	1.6
Number of Subjects on Medication (N=718)				
yes	175	48.7	69	19.2
no	184	51.3	290	80.8
# Previous Years at Camp (N=742)				
none	157	42.2	143	38.6
1-3 years	166	44.6	174	47.0
4-6 years	36	9.7	45	12.2
7-13 years	13	3.5	8	2.2

Disabled only	N	%
Primary Disability[2] (N=355)		
Autism	25	7.0
Emotionally disturbed	23	6.5
Sensory impaired: sight/hearing /DB	33	9.3
Mild MR/speech impaired/LD/ADHD[3]	211	59.4
Moderate or severe MR	24	6.8
Physical/orthopedic/health impaired	39	11.0

DB = Deaf-Blind
MR = Mental Retardation
LD = Specific Learning Disability
ADHD = Attention-Deficit Hyperactivity Disorder

Home Setting (N=362)	N	%
Lives at home (incl. foster home)	352	97.2
Lives in a group home	0	0.0
Lives in a residential facility	1	0.3
Other	9	2.5

[1] includes schools such as: alternative, private, and special schools for youth with disabilities

[2] Certain disabilities were grouped together for ease of presentation and reference

[3] Frequencies of the group with mild levels of disabling conditions are as follows:
mild MR (49, 13.8%), speech impaired (10, 2.8%), LD (29, 8.2%), ADHD (123, 34.6%)

cial education teachers, onsite research assistants, and graduate students in special education

The *Inclusive Practices Inventory (IPI)* consists of a core of 10 inclusive practices (e.g., modeling, providing peer assistance, breaking tasks into smaller steps) identified from professional practice and related literature as important for helping youth with disabilities successfully participate in program activities. The IPI is used to assess how often each kind of support (i.e., inclusive practice) is provided to the camper/student across at least three program areas: Self-Help, Social, and Outdoor Recreation. Content validity for the IPI was established by a panel of experts and pilot testing at inclusive outdoor sites in Oregon.

Inter-rater reliability for campers/students who were mildly to severely disabled ranged from 75% to 85% agreement across all three program areas. The IPI was completed by counselors (post only) onsite at the end of the outdoor session to measure the kind and frequency of support or assistance they provided to their camper/student(s) in each of the three program areas.

The *Outdoor Skills Inventory (OSI): Camps* was developed for use with campers with disabilities and focuses on 10 areas (scales) of outdoor recreation common to resident camp programs (e.g., overnight camping, swimming, music, crafts). Counselors or specialists onsite rated (pre-post) the camper/student's level of independence in outdoor recreation skills. Content validity for the OSI: Camps was established by a panel of experts and criterion-related validity was confirmed with acceptable moderate level correlations. Pilot and nationwide field testing of the OSI: Camps' 10 scales on over 2000 campers with mild to severe disabilities during 1993-96 revealed the following reliability statistics: an internal consistency reliability of .84-.98 ($p<.001$), test-retest reliability of .95 ($p<.001$), and inter-rater reliability of .80 ($p<.001$). The OSI: Camps was completed by counselors (post only) on their camper(s) at the end of their camp session.

The *Outdoor Skills Inventory (OSI): Schools* was developed for use with students with disabilities and focuses on six scales (outdoor/environmental education areas) common to resident outdoor school programs stressing natural science field studies (e.g., soil/earth, water, plants). Counselors or instructors measure (pre-post) the student's level of achievement in natural science skills/knowledge. Content validity for the OSI: Schools was established by a panel of experts and through pilot testing in outdoor school programs in Oregon and Indiana. Field testing of the OSI: Schools with over 80 students with and without disabilities revealed an internal consistency reliability of .92-.96 ($p<.001$). The OSI: Schools was completed by counselors (post only) on their student(s) at the end of their outdoor school session.

The Social Interaction Observation (SIO) is an instrument designed to record the types of social interactions of campers and students from videotaped sequences of their participation in resident outdoor program activities (Arick, Fullerton, and Brannan, 1998). Areas of social interactions recorded on the SIO form include appropriate social interaction with peers and/or adults, appropriate solo active participation, no active participation, and inappropriate participation or interaction. SIO recordings are based on a continuous time sample procedure using pre and post videotapings of campers during program activities. Content validity of the SIO for use with youth who are disabled was established by a panel of inclusion experts and a review of the professional literature. Inter-rater reliability correlations between paired observers ranged from .89 to .99 ($p<.001$). The SIO was completed by trained graduate students who coded the social interactions of campers/students by viewing and analyzing pre-post videotapings of them participating in program activities.

The *Individual Characteristics Survey (ICS)* is a 50-item rating scale with six subscales designed to measure the socio-emotional growth of youth with disabilities in the developmental areas of social, communication, domestic responsibility, independence, self-esteem, and recreation. Parents complete the ICS at home to measure the frequency with which the various characteristics of their son or daughter are observed before and after the outdoor experience (i.e., pre-post). Content validity for the ICS was established by a panel of experts, with concurrent and criterion-related validity established with acceptable moderate level correlations. Pilot testing in Oregon and nationwide with over 2500 campers with disabilities revealed the following reliability statistics: an internal consistency reliability of .96 (p<.001), test-retest reliability of .80 (p<.001), and an inter-rater reliability of .65 (p<.001). Parents completed a pre (1 week before the camp/outdoor school program experience) and post (1-2 weeks following) ICS of their son or daughter.

PROCEDURES

The study used a descriptive casual-comparative design that summarized the findings for each assessment for both youth with and without disabilities based on a pre-post or post-only analysis. Comprehensive data collection used multiple sources including parents, counselors, instructors, and onsite video-taped observations.

All data were collected for youth (subjects) with and without disabilities of similar age, sex, and cabin assignment. Although youth weren't paired for activities, for each youth with a disability, a nondisabled cabin peer was identified as a second subject and all data were collected on the pair. Quantitative data collection tasks at each site consisted of identifying 30 pairs of camper/student subjects (30 with disabilities and 30 without disabilities), collecting all research data, and videotaping all subjects. A unique aspect of the project's data collection methods was the use of videotaping to record onsite observations of camper/students' social interactions during program activities.

At each camp or outdoor school site, the camp or program director supervised a full-time NICP Research Assistant (RA), trained by the project staff, who was assigned as the primary person onsite in charge of the collection, monitoring, and organization of all project data. RAs were trained by the NICP Project staff to follow all protocols detailed in the Project's Research Guides for camps and outdoor schools (Brannan, 1998; 1999).

The sequence of data collection was identical for all sites. *Before camp/outdoor school*, a pre-survey of parents using the ICS instrument was mailed to them about their child's personal/social development. During the *first day of the outdoor session*, campers/students were videotaped during group meals and program activities for use with the SIO observation instrument. A pre-survey with counselors/staff was also conducted with the OSI instrument about the campers'/students' skills. During the *last day of the outdoor session*, camper/students were videotaped during group meals and program activities for use with the SIO observation instrument. A post-survey with counselors/staff was conducted with the OSI instrument about campers'/students' skills. A post-survey by counselors/staff was conducted with the IPI instrument regarding inclusive practices they used during the session with campers/students. Lastly, a post-survey using the ICS was mailed to parents about their child's personal/social development.

RESULTS

What Inclusive Practices Were Used for Youth with Disabilities in Outdoor Programs?

Inclusive practices are generally employed to support (or accommodate) individuals in order to facilitate their successful inclusion in the group and program. Counselors use these practices with both youth with and without disabilities whenever an individual needs additional support or instructional assistance. The Inclusive Practices Inventory (IPI) includes 10 different kinds of inclusive practices that were derived from the literature on inclusive education and recognized as important by inclusion experts in assisting youth with disabilities to succeed in mainstream or inclusive programs.

In the study, counselors used the IPI to indicate what practices they employed during activities with individual campers/students with and without disabilities in their group. Table 2 lists ten inclusive practices and indicates the percentage of responses scored yes for each

TABLE 2
Inclusive Practices Provided by Counselors to Youth

Inclusive Practice Inventory (IPI)
Percent of Responses Scored 'Yes' by Counselors Across
Self-Help, Social, and Recreation Program Areas for each Inclusive Practice
(Post Data only for 14 Summer Camps and Outdoor Schools)

Inclusive Practices *	Disabled		Non-Disabled		Level of Significance.
The following kinds of support were provided subjects to allow them to complete the program activities: Note: 1 is the highest rank	Rank	%	Rank	%	
Gave encouragement/motivational support.	1	70.7%	1	49.3%	p < .001
Modeled the activity.	2	49.2%	2	31.1%	p < .001
Gave subject more time.	3	40.8%	6	11.0%	p < .001
Arranged for peer to provide assistance.	4	36.5%	3	14.9%	p < .001
Provided subject w/ physical assistance.	5	34.2%	7	10.6%	p < .001
Broke task into smaller steps.	6	31.9%	5	11.2%	p < .001
Provided alternative strategies.	7	30.5%	4	11.3%	p < .001
Provided extra practice.	8	18.5%	8	8.3%	p < .001
Allowed alternate ways of communication.	9	10.3%	9	3.1%	p < .001
Provided subject with special equipment.	10	5.8%	10	0.8%	p < .001

***Inclusive practices refers to kinds of support provided for youth with disabilities to help them successfully participate in program activities.**

practice in three program areas: self-help, social, and recreation (for camps) or science/environ-/mental (for outdoor schools).

Across all 14 camps and outdoor schools studied, the five highest ranked types of support provided to youth with disabilities on the IPI were as follows: (a) gave encouragement/motivational support, (b) modeled the activity, (c) gave subject more time, (d) arranged for peer to provide assistance, and (e) provided subject with physical assistance.

Several similarities and differences were found in the practices used with youth who were disabled and with youth who were non-disabled. For example, the same two kinds of individual support (gave encouragement/ motivational support and modeled the activity) were provided most frequently to both youth with and without disabilities, but youth with disabilities demonstrated a greater need for them than their peers without disabilities. The remaining 8 practices were also used by counselors with both groups of subjects, but again were used more frequently with youth with disabilities. In particular, youth with disabilities (40.8%) needed more time to complete activities than youth without disabilities (11.0%). Additional analysis revealed that youth with disabilities needed extra time more often in the area of self-help (personal care routines) and less often in recreation and social activities. Chi Square tests were run on each of the 10 items to test for significant differences between inclusive practices provided by counselors to youth with disabilities and by counselors to youth without disabilities. For all 10 practices, youth with disabilities were found to receive significantly more support than their peers who were not disabled (p<.001).

What Skill Development Occurred for Youth in Program Activities at Camp and Outdoor School?

At the end of each program session, camp counselors rated their campers' skill levels on OSI: Camps primarily in the recreation/living area, while outdoor school counselors rated their students' skill levels on the OSI: Schools primarily in the natural science/environmental area (see Tables 3 and 4). On the OSI: Camps, as noted in Table 3, counselors reported that youth with disabilities were at least partially independent on the post assessment of outdoor skills, and that youth without disabilities were fully independent on the post assessment. Campers without disabilities had average scores significantly higher than those of their peers with disabilities for all 10 areas (scales). For all categories, except fishing, the difference was significant at the .001 level; for fishing the difference was significant at the .05 level.

The average scores on the OSI: Schools indicate that counselors rated students with disabilities to be at the developing achievement level on the post assessment of natural science knowledge/skills, and that students without disabilities were rated to be at the proficient level of achievement on the post assessment (Table 4). Students without disabilities had significantly higher average scores, with levels of significance ranging from .05 to .001, than their peer with disabilities for the two recreation areas (scales) and for five of the six natural science areas (scales). There was no significant difference between the groups for the Soil/Earth area.

What Changes in Social Interaction Occurred for Youth During the Outdoor Program?

Videotape Observations

Analyses of Social Interaction Observation (SIO) data were completed for 10 of the camps and outdoor schools that provided complete pre-to-post (beginning of session to end of session) videotape observations of youth with and without disabilities. Paired *t*-tests were used to compare the pre- and post-observation frequencies for each observation category (see Table 5). Results showed an increase in the amount of time campers and students spent actively participating in an activity. Youth with disabilities significantly decreased the amount of time they spent in no active participation. Concomitantly, they significantly increased the amount of time they spent engaged in appropriate social interaction with peers without disabilities and with groups of peers/adults from the pre to the post observation. The same results were found for youth without disabilities. Thus, across a variety of group activities in these inclusive outdoor programs, youth with and without disabilities showed the same pattern of a decrease in non-interaction and an increase in appropriate social interaction with peers and within groups of peers and adults.

Survey of Counselors

At the end of the outdoor program session, counselors indicated whether they observed any change (i.e., increase, stayed the same, or decrease) in their campers' or students' social interactions with peers and adults since the start of the camp or outdoor school (i.e., pre-post). As illustrated in Table 6, the counselors judged that 62% of the youth with disabilities and 68% of the youth without disabilities exhibited an increase in social interactions with their peers. Similar, but smaller, increases in social interactions also occurred with adults. Chi Square tests were run on each of the items to test for significant differences between counselor responses for campers/students with disabilities and for camp ers/students without disabilities. No significant differences were found.

TABLE 3
Camper Achievement on OSI at End of Camp Session - 12 Summer Camps (1998, 1999)

Outdoor Skills Inventory (OSI): Post Data only						
		Disabled N = 355		Non-disabled N = 354		Groups Compared
Scale	Sample Items	Number of Campers	Average Score*	Number of Campers	Average Score*	Level of Significance
Nature Environmental (9 items out of 10)	• Recognizes natural objects • Picks up litter	290	3.54	293	3.76	p < .001
Overnight Camping (14 items out of 14)	• Roll sleeping bag • Helps cook meal	93	3.26	104	3.61	p < .001
Fitness/Hiking (7 items out of 7)	• Negotiates main camp area • Hikes 1/4 mile	165	3.42	164	3.79	p < .001
Boating (8 items out of 8)	• Puts on life jacket • Rows/paddles boat	167	3.52	176	3.80	p < .001
Swimming (12 items out of 12)	• Enters pool/water safely • Face floats	203	3.55	210	3.86	p < .001
Fishing (3 items out of 8)	• Casts a line • Hooks a fish	55	3.39	52	3.74	p < .05
Music/Drama/Crafts (4 items out of 7)	• Sings songs • Participates in skits	291	3.33	292	3.66	p < .001
Equestrian (9 items out of 11)	• Pets horse • Mounts horse	131	3.54	126	3.88	p < .001
Ropes/Challenge Course (2 items out of 3)	• Completes group initiatives	128	3.21	147	3.77	p < .001
Sports/Games(3 items out of 3)	• Plays individual sports/games	245	3.25	250	3.82	p < .001

*Recreation/living skills on the OSI's scales are stated in a positive manner and were rated by counselors as: 1=Not Independent, 2=Minimally Independent, 3=Partially Independent, or 4=Fully Independent

TABLE 4
Student Achievement on OSI at End of Session - 2 Outdoor Schools (1998, 1999)

Outdoor Skills Inventory (OSI) Post Data only						
		Disabled (N = 43)		Non-disabled (N = 42)		Groups Compared
Scale	Sample Items	Number of Campers	Average Score*	Number of Campers	Average Score*	Level of Significance
Fitness/Hiking (7 items out of 7)	• Negotiates main camp area • Hikes 1/4 mile	25	3.69	24	3.94	p < .05
Music/Drama (7 items out of 7)	• Sings songs • Participates in skits	34	3.29	35	3.73	p < .05
Soil/Earth (7 items out of 7)	• Identifies soil layers • Describes how soil is important	20	3.42	25	3.99	n.s.
Water (7 items out of 7)	• Identifies objects that float • Tests for general water quality	19	3.47	25	4.12	p < .05
Plants (6 items out of 6)	• Describes plant characteristics•	16	3.21	20	4.30	p < .01
Animals/Birds (8 items out of 8)	• Describes habitat requirements	12	2.83	19	4.10	p < .001
Atmosphere (6 items out of 6)	• Reads a thermometer • Helps to develop a weather forecast	15	2.62	17	3.84	p < .001
Environmental Etiquette (8 items out of 8)	• Stays on path/trail during walks • Picks up litter	22	3.82	23	4.43	p < .05

* Skills on the OSI's scales are stated in a positive manner and were rater by counselors as follows:

Recreation/living skills (Fitness/Hiking, Music/Drama)
1 = Not Independent, 3 = Partially Independent, or
2 = Minimally Independent, 4 = Fully Independent.

Life Science/Environmental Skills (Soil/Earth, Water, Plants, Animals/Birds, Atmosphere, Environmental Etiquette)
1=Beginning Achievement 2=Emerging Achievement 3=Developing Achievement
4=Proficient Achievement 5=Advance Achievement 6=Exemplary Achievement

TABLE 5

Pre-Post Social Interaction Analysis of Youth with and without Disabilities in Outdoor Programs

Youth with Disabilities: Social Interaction During Program

10 Sites: paired t-tests

Type of Social Interaction	Pre-Observation Mean % (N=240)	Post-Observation Mean % (N=240)	Level of Significance
1. Appropriate Social Interaction in Group with Adult	13.30	19.83	n.s.
2. Appropriate Social Interaction in Group with Peer	20.92	22.78	p < .05
3. Appropriate Social Interaction in Group with Adult and Peer	8.68	10.40	n.s.
1-3. Appropriate Social Interaction in Group with Adult, or Peer, or Both Adult and Peer	42.89	48.79	p < .05
4. Appropriate Solo Active Participation	31.19	32.54	n.s.
5. No active Participation	23.92	17.53	p < .05

Youth Without Disabilities: Social Interaction During Program

10 Sites: paired t-tests

Type of Social Interaction	Pre-Observation Mean % (N=252)	Post-Observation Mean % (N=279)	Level of Significance
1. Appropriate Social Interaction in Group with Adult	8.17	7.09	n.s.
2. Appropriate Social Interaction in Group with Peer	26.44	32.90	p < .01
3. Appropriate Social Interaction in Group with Adult and Peer	9.25	10.57	n.s.
1-3. Appropriate Social Interaction in Group with Adult, or Peer, or Both Adult and Peer	43.85	50.56	p < .001
4. Appropriate Solo Active Participation	32.77	31.84	n.s.
5. No active Participation	22.42	16.58	p < .05

TABLE 6
Counselor Judgment of Camper Change in Social Interactions: OSI

Outdoor Skills Inventory (OSI)
Average Percent of Change in Social Interaction Reported by Counselor
Post Data only for All 14 Sites: 1998,1999 (N = 794)

	Disabled (N=398)						Non-Disabled (N=396)						Groups Compared
	decreased		same		increased		decreased		same		increased		
	N	%	N	%	N	%	N	%	N	%	N	%	Level of Signif.
Social interactions with peers	17	4.7	94	23.6	247	62.1	7	2.0	108	30.3	241	67.7	n.s.
Social interactions with adults	7	2.0	148	41.6	201	56.5	4	1.4	154	43.8	194	55.1	n.s.

What Growth Did Parents Observe for Youth Following Camp and Outdoor School?

The Individual Characteristics Survey (ICS) was used pre-post to determine if parents observed any growth in their son or daughter after returning home from camp or outdoor school (see Table 7). Parents of youth with disabilities scored their child significantly higher (p-values ranging from 05 to .001) on the ICS at post assessment in the following areas (scales): (a) communication, (b) independence, and (c) self-esteem. Parents of youth without disabilities scored their child significantly higher (p-values ranging from .05 to .001) at post assessment in the areas (scales) of communication and independence. For the total scale, youth with disabilities improved their growth at the .01 significance level and their peers without disabilities improved at the .05 significance level.

DISCUSSION AND IMPLICATIONS

The NICP project researchers studied inclusive practices at 14 traditional resident camps and outdoor schools across the country that meaningfully integrate youth with disabilities into their program (i.e., inclusive). The project also investigated the impact of such programs on youth with and without disabilities at each site. Validated measures were used to collect quantitative data and the study employed varied methods such as objective assessments, surveys, and video samples to determine the effects of these outdoor programs on 743 youth. Inclusive practices were identified that were relevant for all participants and positive outcomes across each of the measures were found for youth with and without disabilities.

Inclusive practices were identified that are important for use by counselors with their campers/students and complement ones recommended by professionals promoting inclusive camps and outdoor/environmental education programs (McAvoy and Schleien, 2001; Roswal, Dowd, and Bynum, 1997; Solis, 2001). At inclusive camp and outdoor school sites, counselors used a variety of support and teaching strategies with individual campers or students in their groups. Certain youth, both with and without disabilities, needed additional support, guidance, and instruction beyond that given to the group as a whole. Researchers found that the two most frequent types of support, *encouragement/ motivation* and *modeling*, are needed for both groups of youth. With the addition of providing *additional time,* these three inclusive practices were ones

TABLE 7
Parent Evaluation of Child Growth on the Individual Characteristics Survey (ICS)

Pre-Post Comparison, All 14 Sites (1998, 1999)			
		Pre - Post Comparison	
Scale	Sample Items	Disabled (N = 246)	Non-Disabled (N = 249)
Social (11 items)	• Tries to get along with others • Makes new friends • Cooperative	n.s.	n.s.
Communication (9 items)	• Communicates own needs • Likes to share own feelings • Initiates conversations	p <=.001)	p< =.001)
Domestic Responsibility (7 items)	• Helps with chores • Is on time • Completes assigned tasks	n.s.	n.s.
Independence (9 items)	• Adapts during separations from family • Enjoys own leisure time • Seems more mature	p<=.001	p<.05
Self-Esteem (9 items)	• Self-confident • Positive Attitude • Happy	p<=.01	n.s.
Recreation Interest (5 items)	• Enjoys the outdoors • Enjoys physical activity • Enjoys recreation with family	n.s.	n.s.
Total Score (50 items)		p<=.01	p<=.05

All items (i.e., individual characteristics) on each of the ICS's six subscales are stated in a positive manner and were rated by the parents as:
0 = Never Observed, 1 = Sometimes Observed, 2 = Often Observed, 3 = Always Observed

used most frequently with youth with disabilities so that they could successfully participate in outdoor program activities. The finding that youth with disabilities more often needed extra time in the area of personal care routines has important implications for how schedules are managed in camp/outdoor school programs to accommodate such participants. Interviews with staff revealed a variety of ways that outdoor programs can provide individual participants with needed time for self-help tasks and also address the group's needs (Brannan et al., in press).

Positive outcomes were found for youth of all abilities who participated in traditional outdoor programs that were inclusive. Across the country, youth with and without disabilities were found to grow in their outdoor skills and personal/social development (e.g., self-reliance, social interaction, communication, self-esteem) while attending resident camp and outdoor school programs. The benefits to youth without disabilities participating in an inclusive resident outdoor experience, combined with the contributions of such community living experiences to their growth and development, are revealed in this study and strongly supported by other professionals (Jordan, 1997; McAvoy and Schleien, 2001; Moon, Rogerson, and Komissar, 1991; Sable, 1992; Schleien, Hornfeldt, and McAvoy, 1994). The benefits to youth with disabilities of participating in inclusive resident outdoor programs are similar to the benefits of attending specialized camps (Brannan et al., 1998).

Change in social interaction patterns were found to be the same for both groups of campers/students, and both groups significantly increased their social interactions with peers and their active participation in the program over time. This outcome is an indication of successful integration because both groups' frequency of non-interaction, peer interaction, and adult interaction exhibited the same pattern over time. These findings, based on videotapes of actual social interactions, were also consistent with the counselor surveys that reported social interaction increases for all subjects. The use of the method (e.g., SIO) to code videotaped observations of subjects participating in program activities proved to be an effective procedure for assessing social interactions, one that was non-intrusive to campers, students, and staff, and that provided a useful visual and audio record of a camper/student's social behavior for subsequent study and analysis. Support exists for the use of similar observation methods of social interactions and its potential for use in future research (Schleien, Ray, and Green, 1997).

Parent judgments about the growth they observed in their son or daughter at home following the outdoor program proved to be significant for both groups of youth in the areas of independence (self-reliance) and communication and significant in the area of self-esteem for youth with disabilities. This study met a major need for follow-up measurement to determine the transfer or generalization of gains made by youth in outdoor settings to the home and community. Related research by Giallo (1984) and McAvoy, Schatz, Stutz, Schleien, and Lais (1989) also confirm the positive carry-over impact and benefits of resident outdoor programs for participants with disabilities. An important implication for camps, schools, and other youth serving agencies is that parents can be included as important evaluators in determining program effects on their son or daughter.

Positive outcomes for youth were achieved in resident outdoor programs that were predominantly one week in length. Although research has traditionally supported longer program periods for campers with disabilities, this study indicates a positive impact on youth with and without disabilities experiencing a short-term inclusive program at a resident outdoor site (e.g., one-week programs). Support for short-term intensive outdoor experiences is also indicated in related research conducted by Brannan et al. (1998), Marsh (1999), and McAvoy and Schleien (2001) and holds promise for the many camps and outdoor school programs nationwide that typically operate one-week programs.

Instruments were developed and implemented that are useful for measuring youth outcomes. The validated instruments developed may be especially helpful to various agencies (e.g., camps, parks and recreation, outdoor schools and centers) serving youth that need ways to help document the outcomes for youth who participate in their programs, as part of the process of obtaining administrative and financial support. Such agencies are increasingly faced with documenting outcomes for participants as a major criterion for such support. This study and related research can play a major role in contributing instrumentation and knowledge regarding the positive impact of outdoor programs on the development of youth. The results of this study are also useful in recognition that youth development has emerged as a high priority and that extensive efforts are underway to identify, confirm, and measure desired outcomes for our nation's youth through research and evaluation (North American Association for Environmental Education [NAAEE] and National Environmental Education and Training Foundation [NEETF], 2001; Search Institute, 2000).

There are practical resources available to support inclusive programming in residential camps and outdoor schools. Given that both youth with and without disabilities experienced positive outcomes that included positive social interactions over time, it appears that a number of sites that participated in the research have developed strategies to successfully operate inclusive programs. The research team also studied and reported on the administrative, staffing, training, and management strategies used by these programs to operate an inclusive camp/outdoor school. These programs could be viable resources for professionals and others interested in inclusive practices employed by outdoor programs (Brannan et al., in press).

Lastly, the NICP research produced information that can be essential to parents and professionals. Positive answers to a number of important questions regarding the importance of youth attending an inclusive camp or outdoor school program were furthered by this study. Questions such as: Is a one-week camp and/or outdoor school experience helpful? What are the specific benefits of an inclusive experience for my child? In what ways do organized outdoor programs contribute to a youngster's "total life education?" Of special relevance, the findings lend strength to long-standing beliefs and more recent legal mandates affecting diverse groups of citizens; namely, inclusion provides personal and social benefits to all citizens (e.g., disabled and non-disabled) who are afforded opportunities to participate together in all areas of life.

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QUALITATIVE OUTCOMES FOR YOUTH WHO PARTICIPATE IN INCLUSIVE PROGRAMS: A MULTI-CASE ANALYSIS ACROSS 14 CAMPS AND OUTDOOR SCHOOLS

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INTRODUCTION

As the number of inclusive programs grows, an important question arises: What are the outcomes of participation in an inclusive camp or outdoor school where children live, learn, and play with peers of varying abilities? Residential camps and outdoor schools and their research partners are striving to develop effective methods to examine the outcomes for program participants (Dworken, 2001). Both quantitative and qualitative methods have been used to examine outcomes such as changes in skill levels, self-perceptions, attitudes, social interaction, and informant or self-reported growth in various areas of development. Qualitative research may help us describe the scope, depth, and context surrounding those outcomes as well as how participants' experiences during a program carry over into their functioning in other environments or situations. In the present study, qualitative outcomes of inclusive residential camps and outdoor schools for children with and without disabilities are described.[1]

LITERATURE REVIEW

Mainstream and Specialized Residential Camps

Parents and staff have reported through surveys and interviews, a variety of positive outcomes for children who attend camps. In a study of 800 children attending six different camps, parents reported in post-camp surveys increases in responsibility, decision-making, self-concept, interpersonal relations, and citizenship in their children (Stone, 1986). In another survey, camp directors and parents identified the four key benefits of camping on children's development as being (in rank order): self-confidence and self-esteem; getting along with others/teamwork; an appreciation for the outdoors/environmental concerns; and recreational skills (American Camping Association, 1997). Across 14 specialized camps for children with disabilities, counselors and parents described in interviews examples of increased independence, initiative, self-reliance, choice-making, and improved social and communication skills (Fullerton, Brannan, & Arick, 2000).

Inclusive Daytime Camps and Other Outdoor Programs

In an evaluation of an integrated day camp for children ages 3 to 11, parents reported they were pleased with their children's experience. Staff reported that children without disabilities had positive attitudes toward their peers with disabilities, and that the children interacted positively (Hamre-Nietupski, Nietupski, Krajewski, Moravec, Riehle, McDonald, J., Sensor, & Cantine-Stull, 1992). McAvoy & Schleien (2001) summarized the outcomes of a series of six inclusive outdoor recreation and interpretive day programs. Levels of social interaction increased between peers with and without disabilities in all of the programs, youth with disabilities were active participants, and positive changes in the attitudes of peers without disabilities toward peers with disabilities occurred. Moreover, when inclusive and separate interpretive programs were compared, children without disabilities in the inclusive program made the same learning gains as their counterparts in the non-inclusive program (Hornfeldt, McAvoy, and Schleien, 1989).

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[1] We gratefully acknowledge Sagamore Publishing, Inc., for permitting us to include portions of material (reprinted or adapted) published in chapters 3 and 12 of the book *Including Youth with Disabilities in Outdoor Programs: Practices, Outcomes, and Resources* (in press), which reports on research conducted by the author.

Inclusive Residential Camps and Outdoor Programs

After participating in integrated, overnight, adventure programs, adults with and without disabilities reported during interviews improved attitudes toward persons with varying abilities, interpersonal relationships, confidence levels, willingness to take risks, feelings about self, goal-setting abilities, leisure skills, and tolerance of stress. In addition, 36% of the adults with disabilities reported increased ability to live independently (McAvoy, L.H., Schatz, E. C., Stuz, M.E., Schleien, S. J. & Lais, G. (1989). Interviews with family members who participated in an inclusive family-based outdoor adventure program revealed that families with a child with disabilities felt more confident to engage in outdoor recreation and other family outings after the experience (Scholl, McAvoy & Smith, 2000). Parents and staff reported that a two-week overnight camp program for three children with severe disabilities and eight children without disabilities was a positive experience for the participants. Non-disabled children initiated interaction and perceived the children with disabilities to be their friends. The children with severe disabilities also showed increases in outdoor skills (Rynders, Schleien & Mustonen, 1990).

Summary

With respect to mainstream and specialized residential camps, informants report that children grow in self-confidence, responsibility, and social skills/interpersonal relations. The studies of inclusive programs for children have found that social interaction between participants is positive, non-disabled peers develop positive attitudes towards their disabled peers, and that both groups learn and develop skills. Studies of inclusive residential outdoor programs for families with a child with a disability and for adults with disabilities found that participants reported increased self-confidence in certain areas.

These studies suggest that qualitative methods have value in revealing the outcomes of inclusive residential outdoor programs. Thus far, research has been limited to single programs and few subjects, and the reports of staff and parents have been analyzed separately. Qualitative methods have not been used to explore whether the specific outcomes reported by staff that emerge during the program can be linked to the outcomes reported by parents when their child returns home. These limitations were addressed in the current study.

Exploring Qualitative Outcomes Across Multiple Programs and Informants

The National Inclusive Camp Practices (NICP)[2] project was a national study that examined qualitative and quantitative outcomes for youth with and without disabilities (Brannan, Fullerton, Arick, Robb & Bender, in press). This paper reports on the qualitative findings that were gathered using case study methodology across multiple programs. Case studies are used to describe the real-life context in which programs impact participants and to explore various effects in situations where there may be no clear, single set of outcomes for all participants (Yin, 1984). When a number of cases are collected, comparative case analysis can be used to analyze common and unique outcomes across individuals (Miles & Huberman, 1984). Single and multi-case studies of this kind have long been used by qualitative researchers (Schwandt, 1998).

In the NICP project, case study data were collected from 14 inclusive programs (12 camps and 2 outdoor schools). Inclusive programs were defined in the study as resident outdoor programs in which youth with and without disabilities attend the same session(s), live together in the same cabins or units, and participate together in the majority of program activities.

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[2] The American Camping Association (ACA) and the NICP research team collaborated on this study, which was funded by the U.S. Department of Education's Office of Special Education and Rehabilitative Services (OSERS) to the Institute for Career and Leisure Development in cooperation with Portland State University.

METHOD

Subjects

Using camper or student applications, six case study subjects, three youth with disabilities and three youth without disabilities, were selected at each site. Subjects with disabilities were selected using the following general criteria (varied depending on campers/students served at each site):

1. one subject with a severe disability (e.g., cognitive, physical)
2. one subject with a mild-moderate disability (e.g., learning disabled)
3. one subject with a disability that is typical or often seen among participants at the site.

Each subject without disabilities was selected from the same cabin and session as one of the subjects with disabilities. The non-disabled cabin mates selected as subjects were also of the same gender and approximate age. In addition, the six subjects (three with disabilities and three without disabilities) at each site were selected so that at least one pair of subjects was male, one pair was female, one pair was younger subjects (ages 6-11) and one pair was older subjects (ages 12-19).

The parents or guardians of the potential subjects were contacted and asked if they would give permission for their child to participate and if they would also be willing to participate in an interview after their child returned home. Participating parents also completed a form requesting demographic information about their child (age, disability, number of years in camp, etc.). Thus, case study subjects had parents who demonstrated interest and commitment to the program by agreeing to their child's and their own added involvement in the research. The selection process described above helped ensure that the subjects with and without disabilities at each site had similar program experiences and parental support.

Interview Protocol and Procedures

NICP Research Assistants (RAs) interviewed participating counselors individually at the end of their subject's camp session. The in-person interview was read as a script to ensure consistency and took approximately 30 minutes. Nine developmental areas were addressed in the interview: social interactions, communication with others, taking responsibility, self-reliance, self-esteem, participation in recreation, skill achievement, self-help, and respect for others (see Table 1). Counselors were read three to five examples of behaviors within each area of development. Counselors were asked to compare their camper's/student's behavior since the first day of camp to the end of the camp session. For each area, the counselor rated the camper's/student's behavior to have either decreased, stayed the same, or improved. For any decrease or improvement, the counselor was asked to provide one or more specific behavioral examples illustrating the change that had occurred.

The parent interviews were conducted using the same format, questions, and procedures as the counselor interviews. The interview format was modified to ask questions about "your child" instead of the camper or student. Parents were interviewed in-person or by phone within one to three weeks after their son or daughter's camp/outdoor school session had ended and the children were back home living with their family. Parents were asked to compare their child's behavior before and after the camp or outdoor school session.

Data Analysis

The same data analysis procedures were used for each case study, allowing for both aggregation and comparison (Miles & Huberman, 1985) and multi-case analysis. The constant comparative method (Mayhut & Morehouse, 1994) guided the data analysis of the interview transcripts. The behavioral examples from counselors and parents for each subject were organized together by developmental area (social interaction, self-reliance, etc.). Two trained graduate student researchers working separately

TABLE 1
Eight Developmental Areas Addressed in Counselor and Parent Interviews

Area of Development	Examples of Development
Social interaction	Makes friends, cooperative with others, leads group in problem solving, shares with others, considerate of others.
Communication	Listens to others, takes initiative in communication, communicates own needs and feelings, resolves miscommunications.
Responsibilities	Helps around site, completes assigned tasks, assumes extra duties, takes care of own belongings, shows up on time.
Self-reliance	Enjoys self during free time, attempts tasks on own, makes own choices for various activities, is independent, is resourceful
Self-esteem	Is happy, has positive feelings about himself/herself, is self-confident, wants to participate in activities.
Participation in recreation	Likes to be out-of-doors, likes physical activity, tries new recreation activities, enjoys recreating with others.
Skill achievement	Grows in level of independence and needs less assistance in performing various camp/outdoor school activities.
Self help	Grooms and dresses self, takes care of own clothing/personal belongings, keeps personal area organized.
Respect for others	Aware of needs and experiences of others, considers viewpoints of others, understands values different than one's own, includes others, expresses understanding of other's abilities.

identified all instances in which both the counselor and the parent described similar growth. The researchers asked themselves, "...Can changes in behaviors or attitudes observed by the counselor during the course of the camp or outdoor school session be linked to any changes in behaviors or attitudes observed by the parent after the subject returned home?" If a counselor-parent description fit more than one developmental category, it was placed in the category viewed as the primary type of growth. The two researchers then compared the growth they had identified across the counselor-parent descriptions. Disagreements were discussed and consensus was reached for all disagreements.

RESULTS AND DISCUSSION

Demographics

In Table 2, demographic information for the case study subjects is presented. The 72 case-study subjects ranged in age from 6 to 19 years 60% were males and 40% were females. Among the 36 subjects with disabilities, the types of disabling conditions included 40.5% with learning disabilities or other high-incidence disabilities, 18.9% with autism or emotional disturbance, 16.2% with moderate to severe mental retardation, and 16.2% with a physical disability or other health impairment.

Overall Results

A total of 61 complete sets of interviews with both the counselor and parent of each subject were collected and analyzed. For youth with disabilities, the majority of their counselors (87%) and parents (80%) reported positive

TABLE 2
Demographics of Case Study Subjects (Total N = 72)

Age

	Disabled		Non-Disabled	
Age	N	%	N	%
6 - 11.9	19	53%	23	64%
12- 19	17	47%	13	36%

Gender

	Disabled		Non-Disabled	
Gender	N	%	N	%
Male	23	62%	21	60%
Female	14	38%	14	40%

School Setting

	Disabled		Non-Disabled	
School	N	%	N	%
Elementary	22	61%	22	61%
Middle	12	32%	14	39%
High	2	5%	0	0

Number of Previous Years at Program

	Disabled		Non-Disabled	
	N	%	N	%
none	21	57%	14	39%
1-3 years	10	27%	14	44%
4-6 years	5	13%	5	14%
7-13 years	1	3%	1	3%

Disabilities of Campers/Students

(N= 36)		N%
Autism or emotional disturbance	7	18.9%
Blind, deaf, visually or hearing impaired, deaf-blind	3	8.1%
Learning disabilities, speech disabilities, attention deficit disorder, mild mental retardation	15	40.5%
Moderate or severe mental retardation	6	16.2%
Orthopedic disabilities, health impaired, traumatic brain injury	6	16.2%

growth in one or more areas of development associated with the camp experience (see Table 3). Positive growth also occurred for youth without disabilities, with 84% of their counselors and 65% of their parents reporting growth in one or more areas. Counselors most often described growth in children with and without disabilities in the areas of social interaction and communication. Parents of both groups most often described growth in the areas of self-esteem and self-reliance. Another area of growth observed by counselors in children without disabilities, but less so by their parents, was the development of greater understanding and respect for others.

TABLE 3
Growth in Youth Attending Camp Programs

	Youth With Disabilities	
	Counselors	Parents
Percent reporting growth in one or more areas:	87%	80%
Most frequent areas of growth: (In rank order)	Social interaction Communication Self-reliance Recreation skills Self-esteem	Self-esteem Social interaction Self-reliance Being responsible Recreation skills

	Youth Without Disabilities	
	Counselors	Parents
Percent reporting growth in one or more areas:	84%	65%
Most frequent areas of growth: (In rank order)	Social interaction Communication Respect for others Self-reliance Recreation skills Self-esteem	Self-help Self reliance Self esteem Recreation skills Being responsible

Linking Outcomes Reported by Counselors with Outcomes Reported by Parents

The researchers also examined examples of growth or positive outcomes reported independently by both the counselor and the parent in the same developmental area. For example, a counselor described how a child, over the course of the program session, became more and more responsible for their ownbelongings. Later, the child's parent reported that they now clean up their room and take better care of their possessions at home. Examples of growth that occurred at camp or outdoor school and continued at home in five developmental areas are described below. These areas include social interaction, self-esteem, self-reliance, communication, and respect for others.

Growth in Social Interaction Skills

Counselors reported that some youth were shy at first but then became very outgoing over the course of the program session. Later, parents reported their child was more willing to initiate interactions with new people. This pattern was seen in youth with and without disabilities. For example, a counselor observed the following behavior of a 15-year-old girl with learning disabilities: "The first day she was very unsure and quiet; within days she was talking with and making friends. When she started making friends, she showed a large awareness for them and their feelings." Later her caseworker reported, "I can't believe so much change could happen in one week. She really made good friends for the first time. Much more confident about talking to new people." A 15-year-old boy's counselor said the following: "He was very quiet and reserved on the first day of camp. About the second day and on he began talking to more people. He ended up being willing to talk to about anyone." Later, his parents made a similar report: "He seems less afraid now to make friends. He is also less timid. Recently, he was very comfortable around different people when our family went on a vacation."

In the area of social interaction, children with disabilities also developed new social awareness and skills, which parents reported were important to the child's social development. For example, a boy aged 15 with cognitive and physical disabilities was observed by his counselor to gradually become more involved in activities with his peers and behave more competently in interacting with both peers and adult staff. Later, his parent described how he was more aware of social cues and able to interact appropriately with adults and peers: "He no longer interrupts adults and says, 'It's the adults turn to talk.'" Prior to camp, when his sister had other children over he was hesitant to interact. After camp, the parent stated, "He has a better comfort level with kids his own age." Lastly, the parent reported that he was more able to reflect on the effectiveness of his communications: "If he says something that doesn't make sense, he sits and thinks and talks about it again later."

Growth in Self-Esteem

Counselors and parents described improved self-confidence as evidenced by a desire to do more challenging activities and having pride in new accomplishments. For example, the counselor of an 8 year old boy with autism commented that at first he sat by himself on the sidelines during activities but by the end of the session he increasingly tried new activities and enjoyed them. After a few weeks at home his parents said; "His confidence has improved. He wants to try harder levels on his Nintendo games now that he is a 'big boy.' He is reading the hints over and over again and wants to try them even though it says very few people can beat those levels. After camp he went ziplining and water sliding. He approached these activities aggressively even though he had never done them before."

Another boy, age 9, with traumatic brain injury and processing disabilities, was very homesick during his week at camp. According to his counselor, "[Although] he would break into tears almost every day, he also said he loved camp. His level of self-esteem improved during his week at camp. He received a lot of attention because he was well liked by his peers, which made him feel good about himself." Three weeks later his parent reflected on the boy's camp experience: "His greatest challenge of the week was being away from his mother, father, and home. He has difficulty understanding lengths of time and he probably didn't understand the length of a week before he left for camp. His deficiency in visual processing made it difficult for him to comprehend when he would go home. Completing the week at camp was an incredible self-esteem boost for him. He told his mom that he was very proud that he made it through the hike to the High Meadow. He felt he had set a goal and had achieved it." Counselors and parents also described positive changes in self-esteem for youth without disabilities.

Growth in Self-Reliance

Counselors described how children became more responsible for themselves over time. Later, parents described their children as having a determination to do things by themselves and to persist until it was done. The counselor of a 13-year-old girl observed this behavior: "At the beginning of the week she would wait around for someone to give her something to do. By Friday's all-camp clean-up she was the first person cleaning without being asked." Upon returning home, her parents shared this story: "A couple days after camp was over, she decided to build a tree fort. She gathered all the tools and materials herself and got to work without any help. She's been saying a lot of, 'Mom, I can do this myself.' She actually worked on her tree fort and finished some parts of it already."

The counselor for an 11-year-old girl observed that she was not used to daily chores, but as the session progressed she "didn't complain and was quick to finish her job." After returning home, her parents, who had assigned her the job of watering the lawn, noted a change in her approach: "She has to water the backyard and didn't like it at first. It took more energy from me to get her out there, but now she is taking it on very responsibly. Our yard is not a little job, so I am very proud of her for organizing it all on her own and with no real complaining about it."

The same pattern was seen in youth with disabilities. For example, a 12-year-old girl with moderate cognitive disability was performing all of her dressing and grooming tasks without prompting from her counselor by the end of the week. Her parent later observed this at home: "She gets up quicker in the morning and wants to get dressed by herself. Really working hard in getting hair done in the morning. Wanting to look good and doing it herself. Accomplishing tasks she sets out to do."

Additionally, parents of youth with disabilities observed their children as having increased self-reliance in the form of initiating their own free-time or solitary activities, which was helpful to the parents. The counselor of a boy, age 15 with physical disabilities who used a wheelchair, observed that by the end of the week he would go where he needed to and do things on his own. After returning home, his parent said: "He is more content to be on his own. Before, his mom always had to give him something to do. He would bug his mom about doing something as soon as she came home. Now he will give her a half hour to recuperate and will keep himself occupied. He tells his mom to go on upstairs and he will take care of things on his own. He also gets dressed more on his own."

The counselor of a boy, age 15 with autism and ADHD, reported the following: "At the beginning of the week, I would have to put soap in his hands and shampoo in his hair when showering. After three days, he got the soap and shampoo by himself. He also became very good at keeping himself occupied during free time." Later, his mother said, "He has become more self-reliant since returning from camp. [For example,] he now puts dishes in the sink after meals. He shows continued growth in keeping himself busy with his own free-time activities."

Growth in Communication Skills

This developmental area included actions such as expressing one's needs and feelings, resolving miscommunications, and leading others in problem solving. Counselors and parents described youth as learning more proactive ways to convey their feelings to others. For example, the counselor of a boy, age 9, with traumatic brain injury/learning disabilities observed: "He made great improvement in his communication with others. He initiated conversations and shared items about his home life with the other boys in his cabin. He loved playing with the boys in the cabin, and didn't participate in any arguments or disagreements." Later at home, his parents noted the following: "He has been making a great effort to communicate his feelings with his parents. He has been very interested in letting them know he can make decisions for himself. As an example, he makes a point of telling his parents when he is going to go to bed, knowing that he can decide when to go. [His mother] felt that his intent when communicating has improved since he came back from camp."

Another boy, age 13 with ADD and an anxiety disorder, learned to express his feelings more appropriately in peer relationships. His counselor said that, at first, "When he was frustrated his first action was aggression toward anyone nearby. He tried hard to control this. Wednesday during his talk with counselor he cried when sharing his feelings. He was very open about feelings; he talked about no one liking him. By Friday he found enjoyment [with his peers]. He really tried hard to change, which was a great growth experience." His parents saw a change in their son upon returning home: "[He is] working on managing his anger. He is much more verbal. Rather then hitting, he discusses a solution.

He doesn't express feelings well, but he seems happier and more confident in dealing with peers. Overheard him explaining to his brother that what his brother was saying could offend someone.

In one instance, a 12-year-old boy developed leadership skills among peers that he then used in new situations after his camp experience. The counselor said he, "…led the group in problem-solving on the challenge course. After the group did the challenge course activity, he took initiative in communicating within the group and getting the group moving." After returning home, his parents reported he was communicating better with his siblings. Later that summer, "He attended another camp—a canoe trip. He was instrumental in resolving a dispute that resulted from miscommunication between his peers on the trip."

Growth in Respect for Others

Given that these were inclusive programs, of particular interest were the descriptions of growth reported in the area of respect for others. Counselors described situations where youth with and without disabilities developed an awareness and sensitivity to the challenges of others. Parents later reported instances where these same youth were more understanding of the differences and needs of others in the family.

One youth's growth experience was centered on his dealings with special-needs campers. He exhibited special concern for several campers in his and another cabin who had disabilities (e.g., walking with them at their pace to activities). He was naturally adept at dealing with them, and he seemed to sense this ability. After camp, his parent noted, "He is good about expressing understanding of others abilities and disabilities." She believes that his dealings with others have improved since camp. Specifically, he seems more empathetic and patient. For example, "He is a very bright child and sometimes gets frustrated when having to talk down to someone. Now, though, he is interacting better with his younger brother."

Youth with disabilities also learned about differences in inclusive programs. The counselor of a 10-year-old boy who was blind described how he reached out to another camper in his cabin group: "There was another special needs camper in his cabin with mental retardation who was almost entirely nonverbal. At first there was almost no communication between the two, but then he realized there was a silent camper in his presence, and he began asking the staff to help him communicate through sign language. He was aware the other camper did not seem to comprehend that he was blind but nonetheless he learned two or three complete sentences in sign language as well as a handful of basic vocabulary words. His most significant growth experience probably involved his efforts at communication with a fellow camper whom he could neither see nor hear. No one suggested he attempt to do so and the staff members who witnessed it were amazed by his efforts." Upon returning home, his mother said he talked about the nonverbal camper in his cabin several times and to several people. She felt that his success in breaking down the communication barrier between the other boy and him was his most significant growth experience. She then went on to describe a conversation they had about children in their neighborhood: "Although he is very outgoing, he is sometimes hesitant to play with the neighborhood children because he senses their awkwardness. [We discussed] that it is difficult for them to play with someone who is blind. Camp seems to have made him more eager to play with children that he does not know very well." These experiences in understanding human differences and bridging them may be a particular outcome of participation in an inclusive camp program for some children.

Summary

A majority of counselors and parents described growth in one or more of nine developmental areas in children who had attended inclusive camps and outdoor schools. In five of the areas, examples of positive skills and self-perceptions that appeared to develop during the program session and then carried over into home environments were linked together for analysis. This analysis revealed several patterns.

In the area of social interaction, some children became more outgoing at camp or outdoor school and later continued interacting with new people in other environments. Some learned new social awareness and skills that they later used in other situations. In the area of self-esteem the impact of confidence-building accomplishments at camp or outdoor school was evident to parents in the form of greater confidence to do challenging activities.

In the area of self-reliance, as children learned to become more responsible for themselves and their assigned duties at camp or outdoor school, they later went home and took more initiative to complete chores, take care of their belongings, dress and groom themselves, or occupy themselves during free time. In the area of communication, some children improved in their ability to express their intentions and feelings or developed skills in group leadership that were later evident to parents in sibling, parent, or peer interactions. And lastly, in the area of respect for others, children with and without disabilities lived and played together as cabin mates in these programs. Later, parents provided examples of their children being more empathetic and patient with younger siblings and skilled at including peers with challenges in peer-group activities.

Discussion

The need for positive growth experiences for youth with and without disabilities are well recognized across various professions, so these findings regarding the potential impact of inclusive outdoor programs on youth are important. These findings are consistent with previous research conducted in mainstream camps with youth without disabilities in which growth in self-confidence, responsibility, and social skills/interpersonal relations were reported (Stone, 1986, ACA, 1997). In a study of specialized camps and youth with disabilities that used the same case study method, the majority of counselors and parents described growth in the same areas of social interaction, communication, self-reliance, and self-esteem (Brannan, Arick, & Fullerton, 1998, Fullerton, Brannan & Arick, 2000). But in addition to these outcomes, these inclusive programs also gave youth with and without disabilities experiences in bridging human differences. Later, for some youth, these experiences influenced their actions in similar situations.

Results of this qualitative study are also congruent with the results from the quantitative study completed with the same subjects and inclusive programs. In that study, direct observations of social interaction between youth with and without disabilities revealed that both groups significantly increased their time in desired social interactions and active participation with peers in program activities. Using a validated survey of social/emotional characteristics, a significant pre to post-program increase in parent ratings occurred in the areas of communication and independence (self-reliance) for both youth with and without disabilities and in self-esteem for youth with disabilities (Brannan et al., in press). Together, these qualitative and quantitative findings indicate that inclusive programs can provide growth experiences for both youth with and without disabilities in important areas of development.

Lastly, the case study method employed in this study made it possible to link within-program and post-program outcomes for individuals. An important next step is to more thoroughly document the individual program experiences associated with those outcomes. The present findings suggest that each participant experiences different outcomes, according to his/her current developmental readiness for growth in a particular area and his/her particular program experiences. The qualitative exploration of possible relationships between program variables and outcomes can add to our understanding of how programs contribute to an individual's development.

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THE ADVENTURE MODEL: A REPLICATION STUDY TO DETERMINE IF DIFFERENT ADVENTURE SKILLS SUPPORT THE MODEL

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BACKGROUND

The Adventure Model, first developed and tested by Ewert and Hollenhorst in 1989, was an effort to describe participation behaviors of adventure recreators based upon their levels of skills and motivations. The model suggests that as adventure recreators increase their level of engagement they experience predictable changes along a number of variables, including level of skill, frequency of participation, locus of decision-making, and social orientation. In addition, as the level of engagement increases, the model predicts that participants will have increased motivation influencing how they participate in adventure activities.

The Adventure Model uses the theory of specialization (Bryan, 1977; Ditton, Loomis, & Choi, 1992) as a developmental framework by suggesting that participants become specialized in their adventure activities, implying that individuals have differing needs and expectations based on skill and activity type. In addition, as suggested by Scott and Shafer (2001), specialization implies a developmental process involving behavior, attitudes, and preferences. Thus, the Adventure Model suggests that as participants become more skilled and specialized, a number of attributes, such as frequency of participation and locus of decision making, change in a predictable manner (Anderson, Anderson, & Young, 2000; Ewert & Hollenhorst, 1989). If true, the implications for adventure education instructors and resource managers include providing more specific opportunities for recreators of different skill groups (Anderson et al., 2000). That is, programming specialists should offer a different "package" of experiences to an individual with more novice skills and abilities than they would to individuals who are more experienced.

The Adventure Model was tested again in 1999 (Anderson et. al., 2000). Although others have tested variations of the model (Priest, 1992; Schuett, 1992), the 1999 study was the first attempt to fully replicate the original study.

While results from the subsequent studies supported the original theory, the need to further investigate types of participants is warranted. For example, both the 1989 and 1999 studies sampled college students enrolled in college courses. As a result, the subjects were from fairly homogeneous backgrounds of skills and motivations. The results raised questions about whether participants from a more diverse background of experience and skills would also exhibit the same predictability as suggested by the model.

In an effort to further examine these questions, the purpose of this study was to answer the following questions: First, will components of the model accurately predict participant characteristics and patterns of use in adventure recreation settings? Second, are there differences between various activity types relative to the Adventure Model? Third, can activity type and skill level be used to predict level of engagement?

Based on Bryan's work on recreational specialization, the Adventure Model characterizes the adventure recreation experience as a merging of personal and environmental attributes as a function of their level of engagement (e.g., introductory, development, commitment). In the Adventure Model, personal attributes are identified as frequency of participation, skill level (self-reported), and locus of decision making (leadership sought as decision maker). Likewise, environmental, or setting attributes are identified as environment sought, risk level sought, group

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size, group experience level, specialized equipment used, and type of leadership). In addition, the model is divided into three levels of engagement, based on the level of individual involvement in the activity. These three levels are identified as introduction, development, and commitment.

While past efforts have suggested that the model can be effective in predicting selected relationships (Ewert & Hollenhorst, 1989; Anderson et al., 2000), a number of suggestions for future work have been made. For example, Anderson et al. (2000) recommended that while "social orientation" was weak as a predictor, the background composition of subjects may have been an influencing factor. Their suggestion was to apply the model to a group of higher risk and nature-oriented activities, which are more homogeneous and sport-specific, and where the selection of the activity is based upon the preferred risk sought by the participants.

It was based upon these and similar recommendations that this study utilized subjects who were participating in sport-specific adventure activities and who registered for a specific skill level that involved a distinctly different level of risk.

METHODS

During the summer of 2000 (May - August) students who were registered for instruction through the University of Minnesota Duluth (UMD) Outdoor Program Kayak and Canoe Institute and Vertical Pursuits School of Climbing were asked to participate in the study. Program course types included sea kayaking, whitewater kayaking, whitewater canoeing, and rock climbing. Course skill levels provided were beginning, intermediate, and instructor training courses.

Participants ranged in age from 18 to 60 years old. While most participants came from the Midwest region of Minnesota, Wisconsin, and Illinois, many also came from other states to receive skills instruction. All participants were asked to complete the survey. Courses typically lasted three days, with the instructor level courses lasting seven days. No overnight trips were included in the study.

A 30-item Likert-type survey similar to that designed by Ewert & Hollenhorst (1989) was used. Each item asked respondents to indicate their level of skill and/or reasons for participating. Response sets ranged from beginning to instructor skills or reasons of participation. For example, "I have little or no experience" to "I have participated in a wide variety of trips, requiring a relatively high level of commitment and exposure to risk." Additional variables to the original model include "Course level" (beginning, intermediate, and instructor), "years of experience," and "frequency of participation." The skill variable asking what level of difficulty the respondent was most comfortable in was determined by the standards of the American Canoe Association. Validity was determined by a panel of experts in each of the skill areas (whitewater paddling, sea kayaking, and rock climbing). No reliability measure was taken.

Skill level was selected as the dependent variable because it can be a quantifiable measure with well recognized standards in both rock climbing (1-5.14) or canoeing (class I-VI). In addition, from the previous work of Ewert and Hollenhorst (1989) skill level was strongly correlated with level of engagement (r=.79). Thus, for this study, skill level was used as a surrogate measure for level of engagement. The variables used to indicate skill level were as follows: frequency of experience, number of years of participation, number of places visited, skill level, equipment needs, partners, decision maker, risk sought, group experience type, environment sought, and experience level. The survey was based on a self-report response with course instructors administering the surveys immediately prior to the start of the course. The data were analyzed with SPSS 10.0 using frequencies, Pearson correlation, one-way ANOVA with Scheffe's post hoc test, and a Discriminant Analysis. The purpose of this part of the study was to ascertain if the model accurately predicted the strength and direction of the identified attributes as a function of skill using a more heterogeneous and realistic sample.

The selected variables were defined in the following ways: Course level (beginning, intermediate, instructor); Frequency of participation (times of participation/season); Years of experience (identified in years); Equipment dependence (very general, some general, some special, technical); Travel partners sought (self, small group, organized group); Decision maker (self, other member, instructor); Risk sought (low, safe, high, on edge); Experience group (programs, peers, alone); Environment sought (developed, some facilities, wild); Gender; Experience level (none, small amount, experienced, very experienced); and, Skill rate (beginning, intermediate, advanced, expert, instructor).

RESULTS

The sample frame consisted of 210 participants who were registered for the University of Minnesota Duluth Outdoor Program summer programs. None of the courses were for college credit. A total of 132 completed questionnaires were received for a response rate of 63%. Course level distribution was as follows: beginning - 90 (69%); intermediate - 21 (16%); and instructor - 20 (15%). Participants were asked to rank their personal skill levels with these responses being: beginner - 65 (50%); intermediate - 45 (34%); advanced - 17 (13%); and, expert - 4 (3%). Course activity types were: rock climbing - 25 (19%), sea kayaking - 54 (41%), and whitewater paddling - 53 (40%). Whitewater canoeing and kayaking were collapsed into "whitewater paddling" because it was felt that the settings for the two were similar in context and mechanics.

Table 1 indicates the results of the Pearson's correlation including a comparison to the results of the Ewert and Hollenhorst (1989) study. As can be seen from these data, there is general congruency between the predicted and actual relationships between the selected variables. Likewise, as listed in Table 2, Anderson et al. (2000) also found corroborating data as to the model's ability to predict the direction of the selected variables. The measures of experience were broadened to include *years of experience and experience level*. *Equipment dependence* was added to determine if equipment is a variable in measuring skill level. The variables that did not support Ewert & Hollenhorst's (1989) Adventure Model were *risk sought, experience group, and travel partners*. No differences exist between gender.

To determine where differences exist among the selected attributes by skill level, a one-way analysis of variance was used. Scheffe's post hoc analysis was used to determine the presence of specific differences. The Scheffe's test was selected because it is a more conservative test than other post hoc tests (Vogt, 1999). Table 3 presents the results of that analysis. From these data, variables showing a positive increase across all skill levels are: *course level, equipment dependence, experience level, skill rate, values gained,* and *self-expression*. Variables that showed a difference only between beginner to intermediate were *decision makers, experience group,* and *environment sought*.

Differences between intermediate and advanced skilled participants, but not with beginners were noted in the variables: *frequency of participation, years of experience, sense of team*. This was expected since a beginner in this study would not yet have acquired a meaningful pattern for these variables. That is, since this was their first experience, they had no frequency, experience, nor sense of team. Also, the differences did increase from intermediate to advanced in these categories.

A Discriminate Analysis (non-stepwise) was used to determine which sets of variables would be the most effective indicators distinguishing between low to high skill levels (Tabachnick & Fidell, 1989). For this analysis, skill level was considered the dependent variable. As listed in Table 4 the Eigenvalue for Function (3.08) accounted for 51.9 percent of the variance and included the variables: *frequency of participation, skill rate, course level, equipment,* and *risk sought*. Function 2 (2.11) was also significant and accounted for 35.6 percent of the variance. The variables associated with Function 2 were: years of experience and environment sought. Table 5 lists the standardized canonical discriminate coefficients. that indicate where the largest correlation exists between each variable by function. Thus, *course frequency of participation, skill rate, course level, equipment*

TABLE 1
Pearson Correlation tests of significance between skill level (level of engagement) and selected variables including comparison to Ewert and Hollenhorst (1989) findings.

		Current Study			**Ewert & Hollenhorst, 1989**		
Variable	**Model Prediction***	**r**	**p**	**Supports Model?**	**r**	**p**	**Supports Model?**
Skill Measures							
Course level	positive	.674	.000	yes			
Frequency of participation	positive	.609	.000	yes	.45	.00	yes
Years of experience	positive	.354	.000	yes			
Equipment dependence	positive	.590	.000	yes			
Travel partners	negative	-.137	.119				
Decision maker	negative	-.335	.000	yes	.38	.00	yes
Risk sought	positive	.012	.896		.27	.00	yes
Experience group	positive	.157	.072				
Environment sought	positive	.221	.026	yes	.36	.00	yes
Gender	negative	-.003	.977				
Experience level	positive	.755	.000	yes			
Skill rate	positive	.708	.000	yes	.79	.00	yes

TABLE 2
Pearson Correlation tests of significance between skill level and selected variables including comparison to Ewert and Hollenhorst (1989), and Anderson et al. (2000) findings.

		Anderson et al., 2000			**Ewert & Hollenhorst, 1989**		
Variable	**Model Prediction***	**r**	**p**	**Supports Model?**	**r**	**p**	**Supports Model?**
User Attributes							
Frequency of participation	positive	.37	.00	yes	.45	.00	yes
Skill	positive	.93	.00	yes	.79	.00	yes
Locus of decision-making	negative	.38	.00	yes	.38	.00	yes
Setting Attributes							
Type of environment	positive	.39	.00	yes	.36	.00	yes
Preferred level of risk	positive	.40	.00	yes	.27	.00	yes
Social orientation:							
friends	positive (sic)	-.06	.63		-.09	.19	
classes	negative	-.01	.92		-.13	.10	
self	positive	.06	.65		.27	.00	yes
teachers	negative	.15	.24		-.05	.32	
peers	positive	.34	.01	yes	.20	.02	yes

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TABLE 3
Results of One-way Anova and Scheffe's test: Skill level by variables

Variable	**F**	**p**	**Supports Model?**	**Direction**
Skill Measures				
Course level	39.83	.000	yes	Increases +++
Frequency of participation	59.66	.000	yes	Increases ++
Years of experience	7.42	.000	yes	No diff. ++
Equipment dependence	24.31	.000	yes	Increases +++
Travel partners	1.67	.177		No differences
Decision maker	6.02	.001	yes	No differences
Risk sought	.110	.954		No differences
Experience group	5.05	.002		No differences
Environment sought	3.90	.011	yes	No differences
Gender	1.76	.159		No differences
Experience level	56.04	.000	yes	Increases +++
Skill rate	46.30	.000	yes	Increases +++

$p<.05$
+ differences lie between beginning and intermediate skill levels
++ differences lie between intermediate and advanced skill levels
+++ differences lie between all skill levels (beginning, intermediate, advanced, and expert)

TABLE 4
Results of Discriminant Analysis

Function	Eigenvalue	% of Variance	Canonical Correlation	Wilk's Lambda	Significance
1	3.08	51.9	.869	.045	.000
2	2.11	35.6	.824	.184	.000
3	.742	12.5	.653	.574	.064

TABLE 5
Standardized Canonical Discriminant Coefficients

Item	Function 1	Function 2
Course level	.444	
Frequency	.666	
Experience level	.511	
Skill rating	.537	
Equipment dependence	.362	
Risk sought	-.014	
Environment sought		.191
Years experience		.170
Gender		.109

needed, risk sought, years of experience and environment sought presented the combination of variables that were the most effective in distinguishing between students with high, intermediate, or low levels of skills. Thus, according to these data, knowing the level of difficulty of the particular course an individual was in, his/her frequency of participation, experience levels, and activity types, would be effective in predicting the level of skill of an individual in a particular activity.

DISCUSSION

The data from this study provide additional support to the findings of the Ewert and Hollenhorst (1989) and the Anderson et al. (2000) studies. Moreover, and as expected, the concept of specialization between activity types and skill levels (Bryan, 1977; Heywood, 1987) was further supported. Perhaps of greatest theoretical importance from this study has been reconfirmation that specialization is a process that involves changes in behavior, knowledge acquisition, and a refinement of one's skills and that these changes have been observed in this particular study. From a theoretical perspective, however, more work needs to be done on the influence activity type plays on the participant expectations and perceptions. This is particularly true given the fact that all of these types of activities (e.g. rock climbing, whitewater boating, caving, etc.) are all lumped under the rubric of adventure recreation. This implies that the activities are all the same which might not be an accurate assumption.

From a more applied perspective, if skill level and experience can be used to define "level of engagement," then the model suggests that as a person becomes more experienced and skilled, then their willingness to participate will increase. In addition, the literature is increasingly consistent relative to the dynamics of individual skill and experience levels with a broad range of attributes including those examined in this study appearing to change as a person's skills change. Said differently, beginners want different things than experts do (Fluker & Turner, 2000).

These findings suggest that instructional strategies might and should be approached differently between both activity types and skill levels. For instance, sea kayakers might not seek risk, but they might want to learn how to respond to dangerous conditions. Rock climbers may have to be instructed regarding clear judgment and decision-making to avoid inappropriate risk seeking. Not surprisingly, anecdotal evidence through discussions with course instructors suggests that sea kayakers would seek skills to access more remote sites in a wider range of sea conditions, but they did not appear to seek, outwardly, greater risk. Conversely, rock climbers sought skills that would allow greater risk taking, yet remoteness of the climbing site was less important to them.

In one sense, this study confirms what most experienced outdoor instructors already know; course design should be predicated on "where" the student is, particularly with respect to skill level, rather than assuming all individuals are starting at the same level. Of course, knowing that and having it confirmed by research is quite different from being able to institute it in program design and delivery.

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USING MEANS-END THEORY TO UNDERSTAND THE OUTDOOR ADVENTURE EXPERIENCE

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INTRODUCTION

According to Ford (1981), outdoor education is "education in, about, and for the outdoors, implying a place, a topic, and a reason" (p. 14). Another working definition stated that outdoor education is "an experiential method of learning which takes place primarily through sensory involvement with the out-of-doors" (Priest & Gass, 1997, p. 17). Priest and Gass also defined outdoor adventure programs as those that use challenging experiences in the outdoors to promote personal and group development.

This research developed a better understanding of the linkages between outdoor adventure program (Outward Bound) experiences and outcomes using means-end analysis. Previously the means-end approach had been used to understand the outcomes of recreational participation in a ropes course program (Goldenberg 1997; Goldenberg, Klenosky, O'Leary, & Templin, 2000). To date, however, means-end analysis had not been used to examine the outcomes of broader outdoor program experiences, such as an Outward Bound course. According to Goldenberg et al. (2000), "additional research should be conducted to better understand this benefit and determine its role and generalizability in other… adventure education settings" (p. 221-222).

BACKGROUND

Research in outdoor education has expanded over the past several years and there has been an increased emphasis on examining the outcomes of outdoor education experiences. Means-end analysis goes beyond looking simply at the benefits from participating in an outdoor education experience. Means-end theory examines the linkages between the benefits and other higher-level outcomes and important personal values.

Means-end theory and its associated methodology, known as laddering, were developed to understand how consumers think about products or services (Gutman, 1982; Reynolds & Gutman, 1988). "Means-end theory seeks to characterize the relationships among particular objects or behaviors, 'the means,' and the outcomes and personal values important to the individual, 'the ends'" (Klenosky, Frauman, Norman, & Gengler, 1998, p. 27). More specifically, the theory characterizes the relationships among three key concepts: attributes, consequences, and personal values. Attributes refer to the characteristics of the product or service. For an Outward Bound course, some of the attributes include the length of the course, location of the course, activities done while on course, and the number of individuals in the group. Consequences refer to the benefits, which are the desired outcomes, and also costs/risks, or undesirable outcomes. Consequences for an Outward Bound course may be that participants learn to work together, learn skills that are needed to function in the outdoor setting, or just learn limitations and strengths as an individual or group. Personal values refer to "highly abstract consequences that summarize desired end-states of being" (Goldenberg et al., 2000, p. 212). Values that may be important for Outward Bound participants include a sense of belonging, excitement, self-fulfillment, fun and enjoyment of life, and a sense of accomplishment.

Rather than treating these three elements, the attributes, consequences, and values as independent of each other, means-end theory is based on the view that these three elements are fundamentally interrelated. Specifically, according to the theory, product/service attributes represent the "means" by which consumers obtain desired consequences/benefits (as well as avoid undesired consequences/costs) and achieve important personal values or "ends" (Gutman, 1982).

Means-end theory has typically been applied to better understand consumer decision-making behavior in a variety of product/service settings. For example, means-end studies have been conducted to examine the factors involved in purchasing a greeting card (Walker & Olson, 1991), selecting a ski destination (Klenosky, Gengler, & Mulvey, 1993), selecting a spring break destination (Klenosky, 2002), and selecting among state park interpretive programs (Klenosky et al., 1998). The means-end approach was also applied to examine ropes course outcomes (Goldenberg, 1997; Goldenberg et al., 2000). The current study was unique in that it was the first application of means-end theory to involve outdoor adventure programming. It was also unique in that it applied means-end theory to understand the factors associated with consumption or participation rather than those involved in product or service decision-making.

PURPOSE OF STUDY

The research reported here built on the foundation of the earlier ropes course study by examining a broader outdoor adventure experience. More specifically, the purpose of this research was to use the means-end approach to develop a better understanding of the outcomes obtained from completing an Outward Bound course. Specifically, the study examined the linkages between the attributes of the service/program experienced (in this case, the elements of an Outward Bound course) and the benefits and higher-level outcomes and personal values obtained or reinforced by completing the course.

LITERATURE REVIEW

Before continuing, it is useful to understand how this research contributes to the broader outdoor adventure education literature.

Outdoor adventure education programs are a form of experiential education. Experiential education is "learning by doing." John Dewey was one of the first educators who wrote about and practiced experiential learning. "Dewey's learning sequence included both theory and experience" (Wurdinger & Priest, 1999, p. 187). Characteristics of experiential education that have been associated with effective student learning include that experience is the best teacher, humans do learn by doing, using all senses to learn is effective, knowledge should be acquired through experience, and "the *what* and the *how* are inseparable counterparts for good teaching" (Freeberg & Taylor, 1963, p. 3). Experiential education can occur in various settings, such as ropes courses, climbing walls, service learning, internships, classroom instruction, and wilderness adventures.

Wilderness trips occur in the wilderness setting, a setting that humans do not control. A wilderness area is a physical and conceptual place, which is "relative rather than an absolute conception and condition" (Miles, 1999, p. 321). The wilderness provides an environment for challenge, growth, and development of both individuals and groups. The wilderness is used by millions of people every year for individual growth and challenge, group dynamics, and therapeutic intentions (Ewert & McAvoy, 2000). According to Friese (1996) over 700 organizations offer wilderness programs for personal growth, and according to Gager (1996), these programs are increasing in numbers by about 15 percent per year.

Common features of outdoor adventure education programs include the setting in which they occur, which is usually the outdoors or a wilderness setting. They usually involve small groups, ranging in sizes up to 16 people. They usually require mastery of skills to meet physical and/or mental challenges that the individual or group may face. These challenges involve group problem solving and decision-making skills. Usually with outdoor education programs, the leader acts more as a facilitator or instructor and not as a guide or a leader. Programs can require a variety of physical activities and challenges (Hattie, Marsh, Neill, & Richards, 1997), such as backpacking or rock climbing.

Outward Bound is an example of an outdoor education program that has contributed to the quality of outdoor education programs. Outward Bound was founded on quality and safety, dedicated to true adventure and making a difference in people's lives (Hirsch, 1999). The core values/pillars of Outward Bound programs are physical fitness, craftsmanship, self-reliance, and compassion. Hattie et al. (1997) reported that in 1994 there were over 40,000 participants in Outward Bound programs worldwide. Today, Outward Bound has over 50 schools in 25 nations on five continents. Outward Bound has set the standard on adventure programming through its leadership, curriculum, and programming.

The Hattie et al. (1997) study examined the effects of adventure programs on a diverse array of outcomes, such as self-concept, locus of control, and leadership. Hattie et al. encouraged others to conduct research in the field and not write articles that are "commercials" for their programs. Their study used a meta-analysis to synthesize the findings across many different investigations. A key finding was that the effects of adventure programs on self-esteem exceeded the effects obtained from other educational programs.

Hattie et al. (1997) suggested that future research "move towards evaluating multiple outcomes and investigating the relation between program characteristics and outcomes" (p. 71). They suggested a need to move from outcomes to theory and process studies. Hattie et al. (1997) discussed four premises about the positive effects of adventure education programming and stated that these premises could be the basis for future research. The four premises included quality of experience, obtaining designed goals, amount and quality of feedback, and examining the individual's coping strategies. "Research on group development in organized wilderness group programs is just beginning and will probably continue to develop as a major research theme" (Ewert & McAvoy, 2000, p. 15). Ewert and McAvoy encouraged researchers to look at the how and why of programming, versus only looking at the what and when of the program. Ewert (1987) suggested that the researcher look beyond the outcomes generated from an outdoor adventure activity and to "provide an understanding as to why it happened and how it can be made to happen again" (p. 5). In short, the current means-end investigation sought to contribute to our understanding of these key why and how questions associated with outdoor adventure programming.

METHODOLOGY

A total of 216 North Carolina Outward Bound School (NCOBS) participants who completed selected courses during the summer of 2001 provided the data for this research. Participants were diverse in age, background, culture, and religion. A self-administered questionnaire was used, and 10% of non-respondents were interviewed in a follow-up telephone study. The self-administered questionnaires, adopted from Goldenberg et al. (2000), Walker and Olson (1988), Botschen and Hemetsberger (1998), and Pieters, Botschen, and Thelen (1998), were used to collect data from the participants. Frauman and Cunningham (2001) stated that "means-end relationships could be identified utilizing traditional self-administered survey-based methods" (p. 109).

Research experts reviewed the questionnaire, and a pilot test was conducted with high school students and outdoor trip leaders. NCOBS representatives worked closely with the researcher to develop the instrument and a pilot test of the questionnaire was also administered to NCOBS participants in May 2001.

The questionnaire contained three sections. The first section included demographics, the second section asked respondents to identify the key outcomes they obtained from the Outward Bound course they had just completed, and finally, respondents were asked why a particular outcome was important to them. Respondents were probed further to explain why the response given (which typically referred to a higher-level outcome) was important. This series of questioning–which led the respondents to link the original outcome to one or more higher-level outcomes, and ultimately to a personal value–is referred to in the means-end literature as "laddering" (Reynolds & Gutman, 1988). Similarly, the series of responses linking a particular outcome to a personal value is referred to as a ladder. An example from this data of a ladder includes the attribute of "the completion of the course" (course completion), followed by the consequence of "I had doubts about whether I could complete the course well" (personal challenges), which linked to the value of "completing it made me feel I accomplished something" (a sense of accomplishment).

DATA ANALYSIS

The data obtained from each respondent was edited and entered into a computer program called LadderMap (Gengler & Reynolds, 1995). As the concepts were entered into the program, content codes were formed based on phrases or key words that emerged. These content codes were coded by two researchers, reviewed by an independent coder, and then reviewed by two faculty members. A series of hierarchical value maps (HVMs), which provided a graphical summary of the relationships and links between the attributes, consequences, and values were then constructed. Each HVM summarized the key linkages among the outcomes and personal values that emerged from content analysis procedures. While creating the HVMs, the researcher determined which items and relationships should be represented and where these items should be placed on the HVM (Goldenberg et al., 2000) (Figure 1). The size of the circle representing an outcome reflected the number of respondents who mentioned the concept, while the thickness of the lines on the HVM connecting the circles reflected the number of times the outcomes were linked together. The larger the circle or the thicker the line, the more frequently the concept or linkage occurred.

The relationship among the concepts on the HVM provided useful insight into the outcomes and higher-level values associated with the experience of participating in an Outward Bound course. The concrete outcomes at the bottom of the map are the key aspects that help create the higher value outcomes shown at the top of the map.

RESULTS AND ANALYSIS

Of the 294 questionnaires that were distributed to course participants, a total of 216 were returned, representing a 73.5% return rate. Study participants ranged in age from 14-66 years old, with most (83.3%) between 14 to 18 years old. Participants completed courses ranging in length from 4 to 21 days, with half (50%) lasting 21 days. The majority of respondents were male (57.4%), white (84.3%), and also students (90.3%). Twenty-three percent received a scholarship to attend Outward Bound. A large majority of participants (92.6%) would recommend an Outward Bound course to a friend.

Content categories, or themes, were generated from the data. The list of attributes yielded 15 categories ranging from the entire course to specific course components, such as solo or rock climbing. Fourteen different codes for the consequences were generated, and eight value codes were created. The content codes were developed first by two researchers working together, then by an independent coder who examined 30% of the data, and finally by a third and forth researcher who reviewed the codes and coding assignments.

The hierarchical value map (or HVM) generated for the entire sample, shown in Figure 1, is based on a cutoff point of nine associations between concepts which represents 62.1% of the associations among the concepts in respondents' ladders (for a discussion of the details involved in creating an HVM see Goldenberg et al., 2000). The primary attributes listed by participants in their order of response included the overall course, course components, interactions, rock climbing, expeditioning, and campcraft. The significant consequences included relationships with others, knowledge, and personal

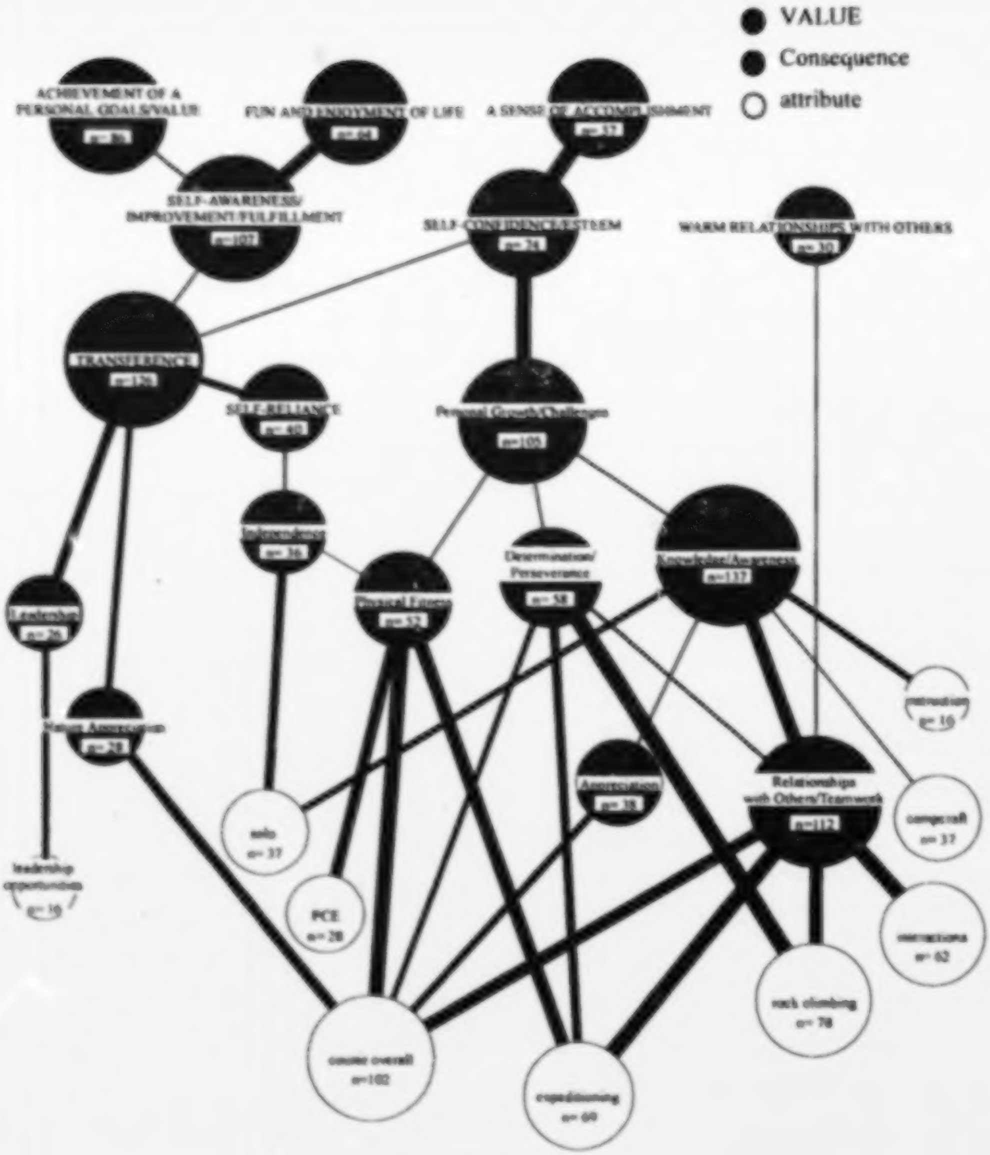
VALUE
Consequence
attribute
ACHIEVEMENT OF A PERSONAL GOALS/VALUE
n=36
FUN AND ENJOYMENT OF LIFE
n=64
A SENSE OF ACCOMPLISHMENT
n=57
SELF-AWARENESS/ IMPROVEMENT/FULFILLMENT
n=107
SELF-CONFIDENCE/ESTEEM
n=74
WARM RELATIONSHIPS WITH OTHERS
n=30
TRANSFERENCE
n=126
SELF-RELIANCE
n=40
Personal Growth/Challenges
n=105
Independence
n=36
Leadership
n=26
Physical Fitness
n=52
Determination/ Perseverance
n=58
Knowledge/Awareness
n=137
Nature Appreciation
n=28
introduction
n=16
Appreciation
n=38
Relationships with Others/Teamwork
n=112
campcraft
n=37
solo
n=37
leadership opportunities
n=19
PCE
n=28
interactions
n=62
rock climbing
n=78
course overall
n=102
expeditioning
n=69

Figure 1. Hierarchical Value Map for Outward Bound Participants (n=216).

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growth/ challenges. The significant values were transference, self-awareness, self-confidence, and personal goals/values.

Strong associations on the map linked rock climbing to determination/perseverance and also rock climbing to relationships with others/teamwork. Another strong link on the map was from personal growth/challenges to self-confidence/esteem. The course overall led to nature appreciation. The attribute of interactions was strongly associated with relationships with others/teamwork. There were several strong links from course overall to various consequences, such as physical fitness and relationships with others/teamwork.

Due to the cutoff selected, only nine of the 15 attributes were included on the map. The attributes not included on the map were canoeing, course beginning/completion, course challenges, environment, new experiences, and time management. Also, only 9 of the 14 consequences appeared on the map. The consequences that did not appear included achievement, efficient, patience, reflection, and survival. All eight of the values appeared on the HVM.

IMPLICATIONS

The data from this study helped contribute to our understanding of the outcomes and benefits obtained from participating in an outdoor adventure program. As Ewert and McAvoy (2000) have noted, "Despite the importance and popularity of the issues associated with group dynamics, there have been relatively few systematic studies done under the rubric of organized groups in wilderness settings" (p. 17). This research contributed to our current understanding of outdoor education programs and simultaneously added to the growing studies based on means-end theory.

It is not unusual in experiential education research to borrow and apply theories from other fields. As evidenced in the present research, means-end theory provides another useful and intuitive framework for increasing our understanding of outdoor adventure and experiential programming.

Traditionally, means-end analysis had been used to understand the bases of product and service choice. The present means-end investigation builds on recent efforts to enhance our understanding of outdoor adventure education programming, and expands the range of settings from the relatively narrow focus of a ropes course to the broader experience afforded by a wilderness-based multi-day outdoor education program. Future research should be conducted to examine the outcomes associated with other forms of outdoor adventure experiences, such as kayaking, canoeing, mountain biking, mountain climbing, or even extended wilderness adventures such as hiking the Appalachian Trial.

In addition to its theoretical contributions, the present investigation holds useful implications for outdoor education practitioners. In particular, the study results can help practitioners develop a better understanding of the attributes, consequences, and values obtained by participating in an outdoor adventure experience. Knowledge of these elements, in particular knowledge of how the three elements are interrelated, can be used in a variety of ways, such as to help develop programs, train staff, write grants, and to create marketing and promotional materials. For example, a program can customize a course for a particular group of individuals by using certain attributes of a wilderness experience to lead to desired values.

Finally, as with any investigation, the present study suggests a number of useful directions for future research. First, future efforts should examine the consequences and values associated with specific attributes or specific program elements. Another possibility would be to compare respondent subgroups to examine similarities and differences in the means-end chains obtained. A different direction would be to compare the data obtained in the present study, which relied on self-administered questionnaires, to data obtained using personal interviews. Lastly, in contrast to this study, which focused only on the immediate outcomes of participation, future studies could be conducted to examine the long-term impacts of outdoor adventure experiences. For example, future research could be conducted to explore the issue of whether "transference," one of the more interesting findings of the present study, did occur.

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LEADER INTEGRATION COMPETENCIES AND STAFF TRAINING IN ADVENTURE PROGRAMS

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BACKGROUND

Leadership competencies have long been a topic of interest in the business and management fields, from Fayol's (1949) position that leaders are born not made, to the position by Adair (1988) who holds that leaders can be developed in the realms of forecasting, planning, organizing, communicating, coordinating, supporting, and evaluating. The outdoor adventure field has also been very interested in leadership. A number of authors have identified outdoor leadership competencies (Buell, 1983; Ford & Blanchard, 1985; Phipps & Swiderski, 1990; Priest 1990; Priest & Gass, 1997; Richardson & Simmons, 1996; Swiderski, 1981). These competencies typically include technical skills (e.g. logistics, navigation, safety, activity skills), people skills (e.g. group interaction, individual development, motivation, teaching, conflict resolution), and the overarching skills of good judgment (Cain & McAvoy, 1990) and ethical behavior and decisions (Fox & McAvoy, 1995). A number of studies and texts have recommended curriculum components and methods to develop leadership competencies in students and leaders (Cain, 1985; Green, 1981; Koessler, 1994; McAvoy, 1980; Probst & Koessler, 1998; Raiola & Sugerman, 1999). These leadership development methods typically include lectures and materials to increase knowledge levels, use of scenarios and case studies, field practice under supervision, mentorship, reflection and feedback/evaluations.

Integrated adventure programs are those that include persons with and without disabilities participating together in planned adventure activities in remote wilderness-like settings (McAvoy & Lais, 1999). Integrated outdoor adventure programs show many positive outcomes for participants (Anderson, Schleien, McAvoy, Lais & Seligman, 1997). These integrated programs require an additional set of leadership skills due to the increased range of abilities and expectations with a group that includes persons with and without disabilities (McAvoy & Lais, 1999; Schleien, McAvoy, Lais & Rynders, 1993). The literature contains a number of best practices for working with persons with disabilities in community based settings (Rynders et. al, 1993; Schleien, Ray & Green, 1997) and in outdoor adventure settings (Havens, 1992). Smith (1992) presented leadership requirements for working in adventure programs that had a therapeutic environment. Lais (2001) and McAvoy & Lais (1999) described programmatic elements recommended for integrated outdoor adventure programs.

Lais (2001) developed the "7 Steps to Integration" in the 1980s and has used these techniques to guide programs and staff training at Wilderness Inquiry based in Minneapolis, Minnesota. These steps are respect each person's dignity, open lines of communication, establish patterns for inclusive decision making, emphasize the value of effort and non-physical accomplishments, focus on group challenges and activities, delineate and delegate tasks, and develop symbiotic relationships among participants. These best practices are used by leaders to successfully integrate persons with and without disabilities on an outdoor adventure trip. Little study has been done regarding the actual competencies needed by leaders in integrated adventure programs, or on the most effective methods to increase or develop a leader's competency in accomplishing integration on an adventure trip. This study was designed to begin an exploration on these topics.

The purpose of this study was to test that competencies about inclusion were learned in staff training. Specifically, the study sought to identify the leadership competencies necessary for leaders in integrated outdoor adventure programs and to measure the effectiveness of a staff training addressing one of these competencies (the ability to apply integration strategies). This study was exploratory in nature and centered on one agency, Wilderness Inquiry, Inc. (WI) of Minneapolis, which is recognized as the foremost integrated outdoor adventure program in the country. The study focused on current staff of Wilderness Inquiry and on the approximately 30 new program staff that Wilderness Inquiry brings into the organization each summer. The study design used a literature review and three focus groups to identify the primary leadership competencies needed for leaders of integrated programs. A primary competency identified was "strategies for applying integration techniques to all levels of ability." A paper-pencil test was then designed to measure the effectiveness of Wilderness Inquiry's nine-day staff training in influencing the integration strategy knowledge of new staff. This test was administered to staff before and after training during the 2000 and 2001 summer trip seasons.

METHODS

A list of integrated program leadership competencies was developed through a review of the literature, observation of leaders at work on an integrated program, three focus groups, and an expert panel. The literature review resulted in a preliminary set of competencies. A researcher accompanied a Wilderness Inquiry five-day winter dogsled adventure trip in northern Minnesota and systematically observed and recorded the leader competencies exhibited during the trip. Focus groups were conducted with Wilderness Inquiry senior leaders, Wilderness Inquiry administrative staff, and Wilderness Inquiry participants who had been on three or more trips. These three focus groups were conducted according to the Krueger's (1994) focus group model, each included six to eight people, and were audiotaped. Data from the trip observations and the focus groups were organized and qualitatively analyzed by reading the data, organizing it into preliminary categories, rechecking the data for fit, and synthesizing the data and cate- participant, but they also reviewed for accuracy, relevance, and understandability. After revision, the test was pilot tested with five newly hired gories to create a preliminary set of primary and secondary leadership competencies. The results of this analysis were submitted to a panel of five experts who had expertise in adventure program leadership, inclusion, special education, and therapeutic recreation. This panel revised and validated the set of competencies. This resulted in a set of five primary competencies and 38 secondary competencies that fit within the five primary ones (see Table 1).

One of the primary competencies identified in this study was "ability to apply integration strategies to all levels of abilities and in varied situations." The next step in this research project was to determine how effective Wilderness Inquiry's nine-day staff training was in increasing new staff members' knowledge of integration strategies. The researchers in this study understood that literature indicates instruction coupled with "experience on the job" is the most effective way to develop outdoor leader competencies (Raiola & Sugerman, 1999). But, staff training is an integral part of most outdoor adventure and camp programs. Therefore, a first step in determining how to develop competencies is to analyze the impact of staff training. It was the purpose of this study to focus on this staff training element and to measure the effectiveness of staff training on one competency, that of integration strategies.

Lais' 7 Steps to Integration were used to develop an eight-item short answer instrument intended to test leader knowledge of integration strategies. A number of steps were taken to make the instrument as valid as possible, but the researchers realize there are limitations to this and any other instrument that asks for a narrative response from participants. First, the eight-item test was developed by the researchers in concert with two experienced administrators from Wilderness Inquiry (including Lais). The test was then reviewed by five experts in therapeutic recreation, inclusion, and outdoor leadership. A draft version of the test was then completed and reviewed by eight experienced leaders and administrators of Wilderness Inquiry. They not only answered the questions as would a research Wilderness Inquiry staff prior to staff training. Again, revisions were made to the test. Three senior administrators at Wilderness Inquiry, and two university professors with expertise in adventure programs and inclusion, developed a list of "correct" responses for each question.

The test consisted of eight problem scenarios that a leader could be expected to encounter on an integrated adventure trip. Study participants were asked to indicate what they would do to solve the problem. An example of a question and elements of correct responses is given below:

> Question 1: As a leader on a canoe trip with 12 participants, you have just encountered a 1/4 mile portage. The portage has a few protruding rocks and a short stretch of downhill. Your group consists of John who has a visual impairment, Sarah who is prone to seizures, Mary who has full use of her upper body and uses a wheelchair, and Larry who gets tired easily and has some difficulty walking on uneven terrain. The rest of the group has no apparent disabilities. How do you get the whole group across the portage?
> Elements of Correct Response for #1:
>
> - Facilitate highest and best involvement level of each participant
> - Ask people what they would like to do, determine strengths based on observation of group
> - Be less interested in speed/efficiency and more interested in having full participation by everyone
> - Preserve dignity of person with disabilities
> - Promote teamwork, everyone contributing and making it a positive experience
> - Approach the task from a perspective of many small tasks, everyone can accomplish at least some tasks
> - Subtly put people in pairs or trios with complementary (symbiotic) conditions and abilities

The eight-item short answer test was administered to 31 Wilderness Inquiry new staff in June of 2000 on the morning their nine-day staff training began, and again on the last afternoon of the training. These new staff members took the test in a monitored area and were given 30 minutes to complete the test. The nine-day staff training included a three-day field component. During the staff training, integration strategies were taught using lecture, scenario and modeling methods. After the first year of use, the test was shortened to a six-item instrument (two questions were eliminated) because it was determined that 30 minutes was not enough time to fully respond to eight questions. In June of 2001 the revised test was administered to 28 Wilderness Inquiry new staff before and after the nine-day staff training that year as in the year before. The staff-training curriculum was the same as it was in 2000. A scoring system was developed to score each test by assigning scores to the narrative responses. Each test was scored independently by a recognized expert in adventure programs and by an expert in inclusion/special education. The responses to the questions were scored on a seven-point scale from zero to six, with six being a perfect score. An analysis of how the two scorers compared (inter-rater reliability) indicated they agreed on most scored items. Scores of the two evaluators were within two points of each other on 94% of the responses in 2000 and 90% in 2001. Test results were analyzed by means, S.D., and t-test on paired data for each year.

RESULTS AND DISCUSSION

The literature review, trip observation, and focus groups resulted in a set of five primary competencies needed in integrated programs, and an additional 38 competencies that fit within those five (Table 1). The following were the five primary competencies: ability to apply integration strategies to all levels of abilities and in varied situations (e.g. assess participants/situations/tasks, role model integration); service oriented leadership abilities (e.g. safety, judgment, service to participants); awareness of and ability to alter the activity (e.g. adapt trip to participants, break down tasks and assign appropriately); awareness of and ability to adapt to or alter the environment (e.g. match needs of environment with needs of participants, passion for wilderness and minimum impact); and awareness of and ability to use resources (e.g. awareness of variables and resources, knowledge of safety policies, ability to transmit safety to participants).

The results of the test administered to new staff members (31 staff in 2000 and 28 staff in 2001) before and after staff training indicated that the Wilderness Inquiry staff training was effective in significantly increasing new staff knowledge of integration strategies. Of a possible total score of 48 points in the year 2000 test, the mean on the pretest was 23.48 (SD 7.86) and the mean on the post-test was 34.94 (SD 6.73). On the pretest the minimum score was 7 and the maximum was 43. On the post-test the minimum score was 23 and the maximum was an almost perfect score of 47. The difference in pre to post-test scores for the year 2000 participants (31) was significant at the .0005 level, with an effect size of 1.57.

In 2001, 28 new staff were pretested on the first morning of staff training using the revised six-item test. The new staff then participated in the same nine-day staff training as did the participants in the year 2000 part of the study. The staff training included the same material as in 2000, and included a three-day field component. The post-test was administered at the end of the nine-day staff training. The 2001 test consisted of six of the original questions from year 2000, and each response had a possible score of zero to six. The responses were scored by the same two individuals who scored the year 2000 responses. Scores of the two evaluators were within two points of each other on 90% of the responses. Of a possible total score of 36, the mean on the year 2001 pretest scores was 22.14(SD 5.64) and the mean on the post-test scores was 26.86 (SD5.51). On the pre-test, the lowest and highest scores were five and 35. On post-test the lowest score was 14 and highest score was 35. The difference in pre- to post-test scores for the year 2001 participants was significant at the .0001 level, with an effect size of .85.

IMPLICATIONS

Integration strategies are best practices and techniques that have been developed through years of field application. These integration best practices do not necessarily come naturally to outdoor leaders. However, integration strategies can be taught to outdoor leaders, and training can influence leader knowledge of these integration strategies. In this present study, Wilderness Inquiry staff training was effective in significantly increasing new staff knowledge of integration best practice strategies. The set of leader competencies generated in this study (Table 1) can assist other programs in recruiting, hiring, developing, and evaluating outdoor leaders in integrated programs. In addition, the set of integration questions and correct responses generated as a result of this study can be used as training scenarios by outdoor adventure organizations in their integration training processes. Integration strategies should be part of staff training for a wide variety of outdoor adventure programs since inclusion of persons with and without disabilities is becoming the expected norm for all outdoor programs.

The leadership competencies that emerged from this study (Table 1) include many of the competencies found in the literature for outdoor leadership in general. Priest and Gass (1997) summarized the results of a meta-analysis of six studies on leadership competencies. They listed 12 core elements of accepted outdoor leadership competencies. The leadership competencies identified by the participants in the current study include all of these core elements. The major difference in the competencies identified in this study as important for integrated groups focused on the leader's ability to respond to a greater degree of diversity in ability levels of participants. Leaders of integrated groups need to understand specific disabilities and be able to recognize the need to intervene to allow for full participation of all group members, regardless of the diversity of abilities. They need to be able to create the adaptations and flexibility that are necessary for leading these groups. Leaders of integrated groups need to be ready and willing to adapt trips, programs and activities of all group members. They need to be able to develop

TABLE 1
Integrated Program Leadership Competencies

Ability to apply integration strategies to all levels of abilities and in varied situations

- ability to develop relationships with and influence participants
- ability to role model integration
- open-mindedness to other's thoughts, abilities, and beliefs
    - compassion
    - empathy
    - sense of humor
    - treat people equally
- enjoy being with group/meeting new people
- ability to inspire confidence and "follower-ship" amongst participants
- ability to adapt participants and staff
- awareness/knowledge of specific disabilities
- ability to role model integration
- ability to assess participants and staff

Awareness of and ability to adapt to or alter the environment

- meet the needs of the activity with need of group
- familiarity of route and travel location
- passion for wilderness

Awareness of and ability to adapt to or use resources

- knowledge of safety policies
- knowledge of and ability to creatively adapt traditional and adaptive gear
- ability to transmit safety to the participants

Service oriented leadership

- strong work ethic
- developed sense of self awareness
- developed sense of judgment
- motivate/comfort/bribe/confront/encourage/reward participants
- selfless service to participants
- positive atmosphere/attitude
- able to receive and give feedback
- continued quest to improve skills and knowledge
- flexible leadership style (situational leadership)
- ability and willingness to accept responsibility for events of the trip
- recognize safety issues
- detail oriented organizational skills
- ability to delegate to other trail staff
- predict actions of group/individual before they happen
- passion for opening people's eyes
- maintain charisma and control in face of adversity

Awareness of and ability to alter the activity

- recognize skills of other leaders and group members
- knowledge of basic WI systems
- awareness of variables/resources available
- proficiency in basic wilderness activities
- adapt trip to participants

trusting/communicative relationships with group members who may have very diverse abilities. They need to be able to model integration so the entire group understands how integration works in an outdoor adventure group situation. And, they need to understand the needs of all participants to allow for active participation on the part of all group members.

Staff training for integration strategies should be purposeful and focus specifically on strategies leaders can use for anticipated circumstances. Training for integration should include presentation of the strategies along with experiential practice in how to apply the strategies. Experiential opportunities to apply integration strategies in staff training can include discussion of scenarios, role modeling, and role playing in the field while working with persons with disabilities.

Additional research is needed to further validate the set of competencies developed in this study. The testing procedure explored in this study can assist other researchers and programs in assessing their staff training efforts and programs. These results only address "knowledge of" integration strategies, and not necessarily "ability to." However, as stated above, staff training (and the knowledge it can impart) is an important part of helping outdoor leaders develop the "ability to." Since it is well accepted in the outdoor adventure field that skill improvement comes from experience, a next step in researching this topic would be to not only do a pre- and post-test before and after staff training, but to also follow up with testing of the same leaders after one to two months spent in the field working integrated trips. This would provide information on knowledge level before and after formal training as well as knowledge level after field application of the integration strategies. A further line of research would be to assess actual integration behavior of leaders while in the field.

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AN ANALYSIS OF OUTDOOR LEADERS' ETHICS GUIDING DECISIONS

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INTRODUCTION

Social environments, including family, school, and workplace experiences, shape ethical values and moral practices. Individuals influence our institutions' ethics and institutions influence individuals' ethics. As institutions and professions mature, they often become more powerful than individuals in ethical influence (Welch, 1994). As a result, as professions mature, professionals seek to insure ethical standards in their fields, usually by developing professional ethical standards (May, 1980). Hunt (1995) made a case that outdoor leaders are engaged in a professional practice and that ethics should have a central role in the practice.

Outdoor leaders work in a field that is comprehensive with the outdoor component as the common thread. The purpose of an outdoor trip may be 1) educational, 2) recreational with minimal to great risk, 3) to provide opportunities for personal growth, or 4) therapeutic. A trip may be part of an outdoor adventure pursuits program or may combine several purposes. The trip may be several hours long in a city park or several weeks long in a wilderness setting. A wide variety of people are clients.

Up to 70,000 people a year may participate in wilderness experience programs in the United States (Friese, Hendee, & Kinziger, 1998). Many more people participate in nonwilderness outdoor programs. Over 700 programs offer wilderness opportunities for personal growth in the United States with a predicted increase of 15 percent a year (Ewert & McAvoy, 1999). During these trips, the behavior modeled and the information shared by the outdoor leaders influences a large number of people, including people with many diverse needs. Garvey (1999) stated that outdoor leaders model what they hold to be the most appropriate behavior in a situation: their action models their values. The respect that leaders model for the environment or students teaches about morality. The ethical frameworks and moral development of these leaders helps shape their influence on others. Therefore, the purpose of this study is to provide information about the ethical frameworks used in decision making by leaders of outdoor education programs.

THE IMPORTANCE OF ETHICS RESEARCH TO OUTDOOR LEADERS

In outdoor education, professionals have begun this important process of examining and helping to shape the ethics and define ethical practices applied in this profession (Fox & Lautt, 1996; Fox & McAvoy, 1995a, 1995b; Guthrie, 2001; Hunt & Wurdinger, 1999; Mitten, 1994). As an example, the Therapeutic Professional Group of the Association of Experiential Education has written a set of ethical standards for practice, for use by outdoor leaders in that area (Gass, 1993).

At the same time, Ewert and McAvoy (1999) report that more attention needs to be paid to the quality of leadership of wilderness group programs, and that while outdoor leaders need to continue to focus on technical competency, this cannot be at the expense and exclusion of critiquing leaders' behaviors (Fox & McAvoy, 1995a). Fox and Reed (1994) found that advanced university students in a leadership course in recreation expressed through their writings that they did not understand ethical leadership and saw the role of leadership as primarily task-oriented.

For practitioners to have a professional identity that goes beyond technical expertise, they need to have an identity that includes the moral elements, which distinguish a profession from an occupation or trade (Bebeau, 1999). This research will help in the understanding of which moral elements may currently be part of outdoor leaders' identity.

Concurrently, there are many obstacles for outdoor leaders as they seek to define ethical standards. In addition to the diversity of the clients and trip duration and location there is the challenge of defining common ethics, the lack of professional certifications, limits to professional ethics, and issues of power and control. This research may help overcome these challenges.

Defining Common Ethics

Both outdoor leaders and their participants are a part of a culture in ethical flux and, according to many, decline (Boss, 1995; Juergensmeyer, 1998; Schaefer, 1998). When moral values are unclear, in flux, or beset by competing interpretations of what is right or wrong, people often become confused about what to do, about what is morally right and wrong; the lure of unethical conduct becomes more powerful and some people become opportunistic (Briles, 1987). Hunt (1995) pointed out that "experiential educators are notoriously individualistic" (p. 338). He implied that some leaders might work in the field primarily to fund personal expeditions giving these individuals less intrinsic motivation to aspire to be ethical professionals. Hunt and Wurdinger (1999) also said that some leaders do not think ethics are relevant. They cited an example of a person who asked a question about a directive that called for deception of students. The staff leader responded "that it was a policy issue and that he didn't have time during staff training to deal with ethics" (Hunt & Wurdinger, 1999 p. 126). The staff leader's behavior and attitude seemed to confuse the staff and implied a lack of ethical accountability. The morals and values will be part of the program, even if unconscious, assumed, and inconsistent (Garvey, 1999). Key concepts in Hunt's (1995) professionalism include a basic duty to put the client's rights and well-being before self-interest, a duty to self-regulation, and service to society.

Lack of Professional Certifications

No widely recognized certifications or other professional controls for outdoor leaders exist (Attarian, 2001; Guthrie, 2001), suggesting a need for a certain amount of congruency in professional ethics. Medina (2001) found that personal experience was the most common type of training background reported by the outdoor leaders in her sample.

A challenge faced by outdoor leaders is defining common ethics. Many companies offer outdoor trips, and many different philosophies exist among these companies. Outdoor leaders have a problem when they seek out a single moral standard to follow, because one does not exist. Ethical dilemmas are exacerbated when individuals may have one code, the companies they work for another code, and the participants or clients of the company another. Guthrie (2001) notes that many outdoor leaders during the busy season receive on the job training, at best.

The Limits of Professional Ethics

As outdoor leaders discuss a professional ethic they need to be aware that a professional ethic, by definition, is a limited or compartmentalized ethic. Ethics have been developed and used because most individuals do not have the understanding to use higher moral thinking without the pressure of these sanctioned professional norms. Professional ethics, however, do not necessarily help professionals achieve the highest ethical standards.

May (1980) describes the problem another way: "When a practitioner is faced with a quandary that includes sorting out moral questions, the practitioner has both formal codes of the profession and informal patterns of behavior that get transmitted from generation to generation in a clinical or practical setting" (p. 213). May (1980) found that standards of performance, informally transmitted, are the most important source of criteria for decision making. The informal venues tend to emphasize technical competence at the expense of other values. The informal and more powerful communication fails to provide independent principles or ways for criticizing peer leaders whose behavior may be less than exemplary reducing ethics to ethos and morals to prevailing mores.

In outdoor leadership, a problem of focusing on technical competency at the expense and exclusion of critiquing leaders behavior has been noted. Fox and McAvoy (1995a) have written about the importance of outdoor leaders not only having expert technical competency, but also complementing that technical competency with an understanding of how their ethics shape their decisions and behavior.

Issues of Power and Control

Issues of power and control may be especially important to outdoor leaders. Briles (1987) found that opportunity and power were large determinants in whether or not a person engaged in unethical behavior. The more power and opportunity a person had, the more likely he or she was to engage in unethical behavior. Writers (Hunt, 1995; Ryan, 1999) have detailed that outdoor leaders are in positions of power and influence. Outdoor leaders intrinsically have a great deal of power over participants, often in isolated areas. They also have power and influence over the environment. Outdoor trips often take place in wilderness areas with the clients participating in activities perceived as dangerous. Many clients come to outdoor programs with increased feelings of insecurity because of the newness of both place and activity. This insecurity results in accentuating the power difference already there between leaders and clients (Mitten, 1994; Loeffler, 1996). If leaders are aware and understand their own manifestation of core ethical values such as respect, responsibility, fairness, caring, trustworthiness, and self-control, this power can be used to effectively teach character education (Skawinski, 1995). On the other hand this power can be used, unintentionally, to reinforce values seen by many to be negative in our society.

RESEARCH ABOUT ETHICS IN OUTDOOR LEADERSHIP

While little actual research about outdoor leadership and ethics has been done, a great deal has been written about ethics in outdoor leadership. Research by this author uncovered over 200 papers concerning outdoor leadership and ethics. These papers divide into eight categories: 1) environmental ethics (including humans' interdependence with the environment and spiritual connection to the environment) 2) ethical philosophy, 3) teaching ethics and values, 4) quandary ethics, including the use of risk and challenge by choice, 5) the ethics of group dynamics and working with client growth, 6) ethics included in leaders' skills such as decision making and judgment, 7) gender ethics, and 8) inclusivity ethics. The wealth of writing shows the importance of the topic of ethics to outdoor leaders.

As people learn about and use values and rules, they develop ethical frameworks. Fox and Lautt (1996) define ethical frameworks as "complex sets of value claims, rationales, and rules that guide behavior and include the cognitive process (moral reasoning) that lead to decisions and actions" (p. 19).

Fox and McAvoy (1998) highlight the connection between ethical philosophy and frameworks and outdoor leadership practices and the need for more research and continual dialogue to support ethical analysis. Well grounded ethics can help keep a positive and responsive social order. They want ethics to be on the daily agenda, not reserved only for matters of great monument.

Fox and McAvoy (1995a, 1998) found that outdoor leaders use a "multi-layered framework of values and systems" and that "caring and justice were the two values that surfaced most often, either individually or intertwined with other value concepts" (p. 2). Calling attention to needing further study, they note that some of the ethical systems educators seemed to use are inherently exclusive or contradictory. Gender and preference of ethical framework for outdoor leaders has not been studied, though there continues to be a controversy about a gender bias between an ethic of care (as women's preference) and an ethic of justice (as men's preference) (Carse & Nelson, 1996; Gilligan, 1892; Manning, 1992).

Even though professionals in outdoor education have begun to develop an understanding of the ethics used by outdoor leaders, more research about the ethical frameworks used by outdoor leaders is needed to fill in the gaps in the literature (Ryan, 1999). Fox and Lautt (1996) point out that understanding ethical frameworks that outdoor leaders use can help practitioners in outdoor education move towards a congruency between values and behavior. It may help practitioners and managers understand the informal information sharing, as well.

The purpose of this study was to provide information about the ethical frameworks used in decision making by outdoor leaders. To that end this research was an analysis of the ethical frameworks and moral reasoning structures used by outdoor leaders during outdoor trips, and it specifically examined outdoor leaders' ethical frameworks as they related to caring and justice orientations. The specific study questions addressed in this paper are:

- How often do outdoor leaders select *post-conventional moral arguments* as compared to other groups?
- To what extent do outdoor leaders choose care-centered or justice-centered actions?
- What justifications do outdoor leaders use for their actions?
- Is there a relationship between outdoor leaders' actions and justifications and their gender, parental status, birth identity, class identity now, age, and years as an outdoor leader?

METHODS

The purpose of this study was to add to the body of knowledge about the ethical frameworks of outdoor leaders. This research was exploratory and descriptive; no hypotheses were tested. Both quantitative and qualitative methods were used. To provide data, two instruments, the Defining Issues Test (DIT-2) (Rest & Narvaez, 1998) and the fable instrument developed by Dr. Rita Manning (1992) were used.

The DIT-2

The DIT-2, a quantitative instrument whose validity has been assessed in terms of seven criteria (Rest, Narvaez, Bebeau, & Thoma, 1999) is a device for understanding moral schemas. Validity and reliability (Cronbach alpha in the upper .70s to low .80s) are discussed in detail in *Post-conventional Moral Thinking: A NeoKohlbergian Approach* (Rest et al., 1999). Used for over 25 years, this instrument measures people's development of social justice concepts. The instrument consists of ratings and rankings of 12 issues for each of four dilemmas. The DIT-2 analyzes a person's responses as activating three schemas: personal interest, maintaining norms, and a Post-conventional moral perspective. A primary measure of the DIT-2 is the P-score, which is a measure of what percent of the times a person uses post-conventional arguments in decision making.

Usually, as people mature so does their understanding of the impact of their behaviors on others. The need to consider others' interests as well as their own is also comprehended. For example, young people primarily think of behavior in terms of how it impacts their personal interests and the people in their immediate circle of family and friends. In secondary school people usually begin to conceptualize cooperation in terms of a greater society. In addition to considering family, friends, and people with whom one has a face-to-face relationship, individuals consider strangers, competitors, and little known acquaintances. They respect and obey authorities and understand the usefulness of social norms in establishing a societal network of cooperation (Rest et al., 1999). Post-conventional thinking is signaled by a move from an unquestioning support of authorities to holding authorities accountable, and from supporting all established practices to supporting only those practices that model the community's shared moral ideals (Rest et al., 1999). In this paradigm, post-conventional thinking is desirable in decision making.

While these schemas have a relationship to Kohlberg's stages (1986), they differ. Kohlberg's theory was based on principled ethics and left no room, as an example, for an ethic of care.

Gilligan (1982) and others have said that measures of moral development do not consider women's ways of decision making. However, the design of the DIT-2 allows for a variety of ethical bases to be included in the Post-conventional thinking measurement. The DIT-2 allows for a variety of ethical bases because "how" the person thinks, such as their consideration, is measured rather than "what" the person thinks. The DIT-2 was chosen for two related reasons: 1) to compare the level of moral development of outdoor leaders to the moral development of other groups, and 2) to aid in interpreting the results of the Manning instrument, which is explained below.

The Manning Instrument

The Manning instrument, using a dilemma open to either a justice or caring moral voice, also is designed to measure moral behavior. An adapted fable outlines the problem: A group of moles have to decide whether or not to accommodate a porcupine in their borrow for the winter. Participants are queried with a series of six-layered open-ended questions. For each question the respondents chose an outcome of 1) throw out the porcupine or 2) accommodate the porcupine. Each question also asked why respondents chose their outcome. Their responses to "why" were their justifications.

Of the six-layered questions, question #1 elicits an initial pre-reflective response to the fable. Question #2 allows for reflection and question #3 tests the assumption that after reflection people generally favor a more "caring" response, even if it is not their initial response (Manning, 1992). Question #4 explores moral fault and question #5 accounts for those who have assumed that the porcupine could "make it on its own" (Manning, 1992). Question #6 adds the implication that compromise is impossible and tests to see if serious harm to the caregivers might change a people's outcomes and justifications.

The Manning instrument was used in a study by Manning and piloted by this researcher before using it for this study. Strength of the Manning instrument includes being open to a caring voice as well as a justice voice and that respondents have opportunities to include justifications for their actions. This qualitative aspect allows the researcher to listen to individuals' own voices and adds clarity to understanding if an action originates from a care or justice orientation. For example, a person may choose for the moles to accommodate the porcupine, not from a caring orientation, but rather a utilitarian principle: "If I care for you now, you will likely care for me later, if I am in trouble." The Manning instrument, by design, gives direction for more in-depth research rather than the answer to any one question.

Demographics

Participants completed a series of demographic questions about class, age, ethnicity, gender, and parental status to see if these are associated with moral reasoning. Approval to conduct the study was obtained from the committee for Protection of Human Subjects of the Institutional Review Board at the University of Minnesota, and each study participant filled out a consent form

Sample Selection

Participants were purposively chosen with the following selection criteria: Study participants should currently lead outdoor trips and either work or have in the past worked at least two months of the year leading clients on overnight trips.

Participants were contacted through listservs, the directory of the Association of Experiential Education (AEE), and the Outdoor Network. First, organizations and individuals were sent a call for participants. Leads from these sources seem to include people who both fit the criteria and are serious about outdoor leadership/education as a profession. After verifying that a participant met the criteria, the selection was open and by convenience. While care is taken in generalizing the results of this study, it is likely that the test population represents a larger group of outdoor leaders (Medina, 2001).

Over 100 outdoor leaders were given questionnaires. To avoid bias, one half of the participants were asked to complete the DIT-2 first and the other half were asked to complete the Manning instrument first.

After a potential study participant contacted the researcher, he or she was sent either by mail or e-mail a demographics form and consent form. When these forms were returned and study eligibility was verified, it was determined whether the person should first complete the DIT-2 or the Manning Instrument (basically, every other person received the DIT-2 first).

If the participant was to receive the DIT-2 first, the DIT-2 material (a test booklet and answer sheet) was mailed. Because the DIT-2 is machine scored, the answer sheet could not be folded or wrinkled in any manner. The Center for Ethical Development (University of Minnesota) staff confirmed that researchers should, in cases like this study, send a copy of the answer sheet, have the participant complete it, and then transfer the answers to an official score sheet. To minimize error in transfer, the researcher worked in pairs and data were frequently rechecked. When the DIT-2 was returned, the participant was sent via email the Manning Instrument. If the participant did not have email, a paper copy of the Manning Instrument was mailed to the participant.

If the participant was to receive the Manning Instrument first, the order was reversed for sending materials to the participant. A sheet was kept up to date regarding the status of the questionnaires sent and returned. At regular intervals, participants were reminded to return their questionnaires.

Methods of Data Analysis

The DIT-2 was scored by the Center for the Study of Ethical Development. The analysis included a number of variables per subject, including age, education level, and gender. These research results were compared to previous DIT-2 studies. The researcher did further analysis of the data using SPSS 6.1. Results were reported as statistically significant at alpha .05 or less.

The researcher scored the Manning Instrument. The questions were coded on two levels. The first was on the gross level of "throw the porcupine out" or "accommodate the porcupine." Then the responses for the participant's justification were coded. After reading the responses to "why" asked for each question, the researcher set forth categories for the justifications. These categories were aligned as much as possible with those Manning (1992) used. These categories were: 1) Care, 2) Reciprocity, 3) Honor your commitments, 4) Honor property rights, 5) Virtue of hard work, and 6) Self-interest. Three other people (one man and two women) checked the coding systems for the justifications. There was high agreement. Where there was discrepancy as to which category the justification best represented, the category with the highest number of votes was used.

Data were analyzed using descriptive statistics, including frequencies and means. Independent t-tests, chi square, and analysis of variance were used to determine significance. Results were reported as statistically significant at alpha .05 or less. For One-Way ANOVA tests the Least-significant Difference post hoc comparison was used as a multiple comparison test that examined the statistical differences among group means at the .05 significance level. These research results were compared to those of Manning, but with caution since the populations differ. The results give information to use to begin theory development and suggest guidelines for future research.

RESULTS

Sixty-two people returned the DIT-2 and 60 of them could be scored. Sixty people returned the Manning Instrument and 68 people completed the demographic form. Table 1 summarizes the demographics for 67 outdoor leaders (one person was dropped from the results because his DIT-2 and Manning Instruments were not completed). Respondents averaged 12 years as practitioners. Their ages ranged from 22 to 60 years with the mean age being 36 years old. There were 21 parents (31%). All but two people identified as Anglo. In this study, identity or class is a type of employment classification. Respondents were asked to self-identify their

TABLE 1
Characteristics of Outdoor Leaders

	Total Participants	Female	Male
Age (years)			
Mean	36 years	36 years	36 years
Range	22-60 years	22-57 years	23-60 years
Years in the field			
Mean	12 years	10 years	14 years
Range	1-38 years	1-30 years	1-38 years
Gender:	67	55%	45%
Birth Class ID: (N=67)			
Blue Collar (N=28)	42%	46%	37%
Service (N=10)	15%	19%	10%
Professional (N=29)	43%	35%	53%
Class ID now: (N=64)			
Blue Collar (N=2)	3%	5%	0%
Service (N=15)	22%	24%	21%
Professional (N=47)	70%	65%	79%
Parent Now (N=63):			
Yes	21 / 31%	10 / 27%	11 / 37%
No	42 / 69%	27 / 73%	19 / 63%
Ethnic/Racial (N=63):			
Other	3%	3%	3%
Anglo	97%	97%	97%

birth class as well as their class now. This category may be related to, but is not meant to be an economic class. This variable was included because a sense of identity impacts moral behavior (Bebeau, Rodriguez, & Maeda, 2002). For the purposes of this discussion," birth class" and "class now" will be referred to as "birth class identity" and "class identity now." Given a choice of self-selecting as a person in a working class, service, or professional job classification, 73% of the respondents chose professional as their identity and 25% chose service as their identity for their current job classification. Outdoor leaders identifying as blue collar at birth are more likely to be parents than those identifying as professional class at birth.

In general this group of outdoor leaders is well educated. About 97% of these respondents at least have a college degree and 53% have MS or Ph.D./Ed.D. degrees. Medina (2001) also found over 90% of her outdoor leader respondents had or were finishing an academic degree.

There were no significant demographic differences between the genders. However, there were two strong trends 1) if someone was a parent, the person was more likely to be a male and 2) if someone considered her or his job identity now to be either service or blue collar the person was more likely to be a female. Women also tended, though not strongly, to have worked fewer years as outdoor leaders.

As one would expect, there are significant differences between age and years as an outdoor leader. Usually, the older one was, the longer this person would have been an outdoor leader. Likewise, parents tended to have been outdoor leaders longer and to be older (20 out of 21 parents were at least 35 years old).

How Often Do Outdoor Leaders Select Post-conventional Moral Arguments as Compared to Other Groups?

The DIT-2 measures moral development by asking respondents to pick relevant arguments to five dilemmas, as well as to pick the four most important arguments. The results show how many of the main arguments these outdoor leaders choose were post-conventional in thinking. Post-conventional thinking can indicate that a person will act in the best interest of society. A post-conventional thinking and acting person will see moral actions as contextual, use societal norms as guidelines rather than laws, and put aside her or his personal interest. Martin Luther King is an example of a post-conventional person. If a person were to use societal norms as absolute rules, the person would be said to be operating out of a "maintaining norms" schema. George Wallace would be an extreme example of a maintaining norms person. A person acting out of a personal interest schema would put her or his needs above the law and other societal norms.

Surveys that did not meet the reliability criteria were purged from the study. Two out of 68 surveys were purged. This is significantly below the average elimination rate of 25% to 39% for all DITs (Shulte, 1997, p. 76). P-scores can range from nine to 95 (not 100 because every dilemma does not have four possible P items). For this group of outdoor leaders, the average P-value or post-conventional score was 54. This indicates that the outdoor leaders in this study selected post-conventional arguments 54% of the time. Table 2 shows how this group of outdoor leaders compares to other groups. The average adult selects post-conventional moral arguments about 40% of the time.

TABLE 2
The mean percent of times groups select justifications using post-conventional moral arguments (Bebeau, 1999, Tindall, 2001)

Group	P-Score
Philosophy and political science doctoral students	65
Liberal Protestant seminarians	60
Outdoor leaders	54
Graduate school students	54
Medical students	51
College students	42
The average adult	40
Expert legal witnesses	34
Senior high students	32
Junior high students	22
Institutionalized delinquents	19

The high standard deviation (14.95) for the P-score for this group of outdoor leaders indicates that there was a great deal of variance among this group. The variance shows that 16% of these outdoor leaders were not using the post-conventional schema as often as the average adult while about 81% were using post-conventional arguments more than the average adult does.

Said another way, on the average, outdoor leaders in this study understand and basically accept society's rules. This acceptance is based on formulating and accepting the general moral principles or thinking that underlie these rules. However, when these underlying principles come into conflict with society's rules, outdoor leaders will not necessarily go by convention, many will think in a post-conventional manner and make decisions based on the moral thinking that underlies the convention.

TABLE 3
Outdoor leaders P-scores for select sub-populations

Subpopulation	P-score
Women	57
Men	50
Parents	58
Nonparents	54
Working class birth identity	56
Service birth identity	60
Professional birth identity	57
Service identity now	56
Professional identity	57

Is there a relationship between demographics and P-Scores?

In this group of outdoor leaders, neither education nor age seems to be strong predictors of P-scores, though typically, education and age account for the bulk of variance in P-scores (Rest et al., 1999). This may be due to the large range of ages in a sample with N=62 and the lack of range in education. Additionally, years as an outdoor leader did not seem to have a strong relationship to P-scores.

As is the tendency for the DIT-2, women in this study had higher P-scores than men did (Table 3). While unusual for most populations, gender accounted for the largest variance in the P-scores. Outdoor leaders who believe that they were born into families who worked in service class employment had the highest P-scores (Table 3).

To What Extent Do Outdoor Leaders Choose Care-centered or Justice-centered Actions?

Results from the Manning Instrument showed that the outdoor leaders in this sample seemed to use care-centered actions more than justice-centered actions.

Each respondent received this written fable: *A group of moles spent the summer digging out a comfortable burrow for the winter. When winter came, a lazy porcupine who hadn't bothered to dig its own burrow begged the moles to be let into their burrow. The moles let the porcupine in, but it soon became apparent that things weren't as comfortable as they had once been. The porcupine's sharp quills were jabbing the moles. Based on your reactions to The Fable, please read and answer the questions in the order they are given. Thank you!*

This fable was followed by six questions. Each question had a box to check indicating whether to throw out the porcupine or to accommodate the porcupine. Each question asked for a justification or reason for the decision. When respondents indicated to accommodate the porcupine, this was said to be a care-centered action; to toss the porcupine indicated a justice response. The six questions were as follows:

1. What should the moles do and why?
2. Now, give an answer to this question from a different perspective.
3. Which answer do you like better? Why?
4. Suppose the porcupine had built a burrow but a flood had destroyed it. What should the moles do? Why?
5. Suppose that we add that the porcupine would die if forced outside the burrow. What should the moles do then and why?
6. Suppose that the porcupine's quills were seriously injuring the moles. What should the moles do then and why?

Question #1 elicits an initial pre-reflective response to the fable. In this initial response 70% of the respondents said to accommodate the porcupine. Question #2 asks participants to reflect on the initial response from a different perspective. Respondents usually answered "toss" if they had answered "accommodate" in question #1, and vice-versa. The purpose of Question #2 was to provide a tool for reflection and the results are not reported. After reflection, in response to Question #3, when the outdoor leaders were asked which response they liked better (their response to question #1 or #2) 77% of these outdoor leaders said to accommodate the porcupine. As Manning (1992) suggests, upon

TABLE 4
Respondents indicating to accommodate the porcupine (given in %)

Question	Undergraduate class of Professional and Business Ethics	Outdoor leaders
1 Initial reaction	50%	70%
3 Action upon reflection	Not available	77%
4 No moral fault	91%	88%
5 Porcupine would die	98%	92%
6 Compromise is impossible	40%	30%

reflection, more people choose a caring response.

Question #4 explores whether knowing the porcupine was not to blame for its homelessness would influence one's outcome choice. For example, one's response to Question #1 and #3 may not indicate a caring moral reasoning, but rather a difference in assumptions about blame. Those respondents that did not blame the porcupine for its situation might have chosen to accommodate it, and those that blamed the porcupine for its situation might have chosen to toss the porcupine. When there is no moral fault on the porcupine's part (it was a natural disaster, not laziness that caused its homelessness), more people chose accommodate (88%).

When told the porcupine would die if forced outside, still more of the outdoor leader respondents chose to accommodate. This question accounts for those who have assumed that the porcupine could "make it on its own." Finally, question #6 tests "faith in compromise" as well as tests to see if serious harm to the caregivers might change people's outcomes. When there is the implication that compromise is impossible, 30% of the outdoor leader respondents chose to accommodate. In this question many women and men showed ethical imagination by refusing to see the situation as either/or and continued to propose compromise even when told it was not possible and even when there was risk of injury.

Table 4 compares Manning's undergraduate class of Professional and Business Ethics (given on the first day of class) with this group of outdoor leaders. For Questions # 4-6 the undergraduate class appears somewhat more care-centered than this group of outdoor leaders.

Gender

For the initial or pre-reflective response there were no gender differences. Seventy percent of the women and 70% of the men said to accommodate the porcupine. In Manning's population there was a gender difference, 43% of men and 58% of women said to accommodate the porcupine. Upon reflection (Question #3), three females and three males in this population of outdoor leaders switched their responses from toss the porcupine to accommodate and one female switched her answer to toss the porcupine. There continued to be no significant gender difference for any question. In fact, with a proposed impossibility of compromise, 30% of both women and men continued to say accommodate the porcupine. These results support that male and female outdoor leaders in this study population have similar outcomes in these particular set of decisions.

Parental status

As an initial reaction (question #1), significantly fewer parents chose to accommodate the porcupine (53% verses 78% of the non-parents). After reflection (question #3), 50% of the parents changed their answer from toss the porcupine to accommodate, bringing the percentage accommodating the porcupine to 74%. None of the non-parents changed their responses. When the porcupine was not to blame for its situation, 79% of parents chose accommodate as compared to 93% of the non-parents. This tendency for parents to be more likely to toss the porcupine than nonparents continued when the porcupine would die if turned away and when compromise was implied impossible (questions #5 and #6).

Birth class

As an initial response, those outdoor leaders who said they were born with a "service class" identity had a significantly higher tendency to accommodate the porcupine. Eighty-nine percent of outdoor leaders with a service class birth identity chose to accommodate the porcupine as compared to 67% for each blue collar and professional birth classes. Manning also found that people who identify as service class at birth were more likely to accommodate the porcupine. In Manning's population, 54% of the blue color, 71% of the service and 40% of the professional birth identities chose to accommodate the porcupine. Manning (1992) hypothesized that Nodding's notion that care was learned might be in operation in this case. People growing up in a family where parents work in a service area may see their parents model this behavior and may learn the value of care.

Upon reflection, the responses for all birth classes were similar, with 78% of the service and professional classes accommodating and 75% of the working class accommodating. When the blame is taken away from the porcupine, 100% of the service class birth identity people said to accommodate the porcupine, compared to 88% and 85% of the blue collar and professional classes respectively chose to accommodate the porcupine.

Finally, with the implied impossibility of compromise Manning's theory that "professional class" people learn the least caring skills, may be exemplified in this data. Forty-four percent of the people who identify as service class at birth chose to accommodate the porcupine while 33% and 22% of the blue collar and professional classes respectively chose to accommodate the porcupine.

Class identity now

Because most of the outdoor leaders in this study saw themselves in a professional class (72%), followed by service class (26%), only these two classes were compared. As in birth class identity, there was a tendency in each of the situations for people with a service class identity to be more likely to accommodate the porcupine.

When told that the porcupine was not to blame for its situation, 95% of the outdoor leaders with professional class identities would accommodate the porcupine. That percentage decreased to 92% when told the porcupine would die if forced outside. It seems that blame may be more important than the possibility of death to outdoor leaders with professional class identities. For both situations involving blame or death, 100% of outdoor leaders with service class identities would accommodate the porcupine.

This tendency for a higher percentage of outdoor leaders with service class identities to accommodate the porcupine as compared to outdoor leaders with professional class identities increases dramatically when compromise is implied as impossible; 61% of the outdoor leaders in this study with service class identities chose to accommodate the porcupine and 33% of those with professional identities choose to accommodate the porcupine.

Age and length of time as an outdoor leader

Age and length of time as an outdoor leader are usually related for this population. Therefore tendencies that were true for age are often true for length of time as an outdoor leader. There is such a variance in age that no reliable data can be presented that might indicate what, if any, relationship there might be between age or length of time as an outdoor leader and an outdoor leader's choice of care-centered or justice-centered actions. The data seem to support that people over 30 years may be more likely to toss the porcupine than their younger counterparts, but more research would be needed before any conclusions could be rendered.

What Justifications Do Outdoor Leaders Use for Their Actions?

After reading the responses to "why," asked for each question on the Manning instrument, categories were established for the justifications that these outdoor leaders gave for their decisions either to toss the porcupine or accommodate the porcupine. These categories were aligned as much as possible with those Manning (1992) used. These categories are: 1) Care, 2) Reciprocity, 3) Honor your commitments, 4) Honor property rights, 5) Virtue of hard work, and 6) Self-interest.

- **Care** includes showing compassion and working cooperatively to meet people's needs. It also includes wanting to help others, wanting to alleviate suffering, and wanting to protect life.
- **Reciprocity** was indicated when one person helped another thinking that at some point in the future he or she may need help from the person that he or she is currently helping.
- **Honor your commitments** is a principle from justice ethics.
- **Honor property rights** is a principle from justice ethics.
- **Virtue,** in this case, asks if laziness should be penalized and hard work rewarded.
- **Self-interest** says that people should help themselves first, or my group is more important than other groups.

Forty-eight respondents gave justifications for Question #1, 40 for Question #3, 55 for Question #4, and 54 for Question #5, and 56 for Question #6. The sample size is small, making it difficult to draw conclusions about subsets of the sample; however, the results are markedly different for some groups. This data point to suggested areas for further research. After reporting the results for the total population, results for some demographic subsets are included.

As an initial reaction to the situation (Question #1), the justification most often given was caring (33%), which was used nearly twice as often as the next justification, virtue 16%). These justifications were followed by the principles of honor your commitments (12%), self-interest (7%), and reciprocity (4%). Here is one example of a caring justification from a participant: "Show compassion for the porcupine because the porcupine might have had something bad happen – perceiving laziness. Find out the reason story first." Other care responses were grounded in compassion slightly differently: "The basic good Samaritan thing to do—a little accommodation and change is always hard but usually is beneficial in the long run."

The responses after reflection (Question #3) increased in care justifications to 39%, the percent of missing responses increased, and each of the other responses decreased (roughly) proportionally. As a justification after reflection, one respondent commented, "I like the accommodation because it seems like a cooperative choice. One should always try to help other." Therefore, one might wonder that, if upon reflection, people become more care-centered in their outcomes, as well as more caring in their heart. This speaks to a concern that leaders might want to carefully monitor their own stress levels so that they have the time and capacity to reflect, rather than become caught up in reaction. A response for a study participant might illustrate this concern:

> I had to think about this one, since the second perspective makes me feel much more open, enlightened, compassionate. But at this moment I am feeling that there is just too much suffering in the world for me to fix it, and I can't rescue this porcupine because there would just be a flood of other porcupines in the same predicament, and pretty soon the moles who were trying to save everyone would be burnt out.

When the porcupine was not to blame and a natural cause made it homeless, as tested in Question #4, more respondents made a justification; only 18 % were missing and the nature of the justifications shifted somewhat. The use of reciprocity as a justification increased to 9%, care increased to 49%, and virtue increased to 16%. The virtue justification may have increased because people were saying that since the porcupine wasn't lazy, they would help. For example, "If the porcupine had built his/her own burrow but lost it, the porcupine should have explained this to the moles. Perhaps this would help the moles empathize with the porcupine."

When told the porcupine would die (Question #5) a few more people shifted to care and more argued for honoring your commitments. Fewer respondents used a self-interest justification or a justification based on reciprocity.

The responses when the situation was implied impossible showed a very different distribution. Self-interest now almost equaled care in justification. Care justifications went down by 21% and self-interest justifications rose by 19%. A self-interest justification example is, "The porcupine has to leave. They should put him out even if he is a close friend or family. No person should cause problems with one's health." Another response with a self-interest justification is "He would have to go. Don't put yourself in grave danger just to help save someone. But make your best possible effort."

Gender

Initially, men and women showed little difference in their justifications. Both used the care justification most often, though men's second choice was virtue saying that laziness should be punished and hard work rewarded, while women's second choice was a tie between honor your commitments and virtue. As they reflected (Question #3), however, men and women differed in justifications. Both men and women increased their numbers of care justifications, but women had a larger increase than men did (to 70% and 56%, respectively). Twenty-five percent of men continued to have a virtue justification while women's second choice was self-interest (13%). When no compromise was implied (Question #6), care justification decreased to 41% for the men and 44% for the women. Self-interest rose to 29% for the men and 37% for the women.

Parental status

As in the outcome choices of toss or accommodate, larger differences were found among birth identities and between parents and non-parents than between genders. Initially (Question #1), parents (33%) used care as a justification fewer times than non-parents (49%) and used self-interest as a justification much more (parents 27% and non-parents 3%). This may reflect a micromorality view, which changed upon reflection. After reflection (Question #3), parents used care 67% and non-parents 63%. As a group, reflection seemed to help parents change to caring more than any other group. While, for parents, self-interest remains the second highest justification for each of the first five questions, these parents continue—when the porcupine is not to blame or would die if forced out (Questions #4 and #5)—to use care more times in their justifications than non-parents. When compromise is implied impossible and the risk of injury to the moles increases (Question #6), parents' self-interest justifications equal those of care, while non-parents have fewer self-interest justifications and more virtue justifications.

Class identity

Outdoor leaders who described their birth identity as service were far more likely to justify their outcomes with care. As an initial reaction to the porcupine situation, 83% percent of the outdoor leaders who described their birth identity as service, or almost twice as many as this general population of leaders, justified their outcomes with care. This compares to 35% of blue collar birth identity and 42% in professional birth identity. After reflection (Question #3), 100% of birth identity of service justified their actions with care, whereas 53% of professional birth identity and 60% of blue collar birth identity chose care. When a natural disaster destroyed the porcupine's shelter (Question #4), 22% of those who defined their birth identity as service changed their justification to reciprocity.

As the situation became graver and the porcupine would die if turned out, the amount of care that was used as a justification remained the same for the service birth class. Reciprocity split, and half of that group used the virtue justification. An example is "the moles should accommodate the porcupine only they should set down rules and let the porcupine know that he needs to work..."

When compromise was implied as impossible (Question #6), still 44 % of those outdoor leaders having service birth identities justified their outcome with care and only 11% with self-interest. This compares with 26% of professional identity and 35% blue collar justifying with care and 22% professional and 31% blue collar justifying with self-interest.

DISCUSSION AND CONCLUSIONS

This study answered a call from Fox and McAvoy (1995b) saying that future research should include information about outdoor leaders preconceptions and abilities in using critical thinking skills and in analyzing dilemmas. The results from the DIT-2 seem to show that the outdoor leaders in this study have the ability to use critical thinking skills and analyze dilemmas using Post-conventional thinking. In this study it was found that this well educated group of outdoor leaders selected Post-conventional moral arguments more often then the average adult, more often than expert witnesses in Tindall's 2001 study, and slightly more often than most graduate school students. This population of outdoor leaders selected post-conventional arguments less than Liberal Protestant Seminarians did. Overall this may imply that outdoor leaders in this study use a high level of moral reasoning during their decision making.

Most of the outdoor leaders in this study had completed graduate school. This may indicate that the training of outdoor leaders at the graduate level is useful in helping develop critical thinking skills.

When faced with an initial decision with moral implications, outdoor leaders in this study used care-centered actions to a significantly higher extent then previously reported by Manning (1992). Upon reflection, an even higher portion of outdoor leaders opted for care-centered actions. These data seem to support that when given an opportunity to reflect, people will more often choose a caring response. Perhaps there is a knee-jerk reaction that people first express. This phenomenon seemed especially true for parents in this study. Upon reflection, 50% of the respondents who were parents changed from justice-centered to care-centered actions. However, these same parents returned to justice-centered actions and self-interest justifications when compromise became challenging and was implied impossible. Those outdoor leaders with a professional class identity at birth also had a large percentage change (11%) from justice-centered actions to care-centered actions when answering question #3 after reflection.

There was no gender difference in initial reaction of these outdoor leaders. It appears that both male and female outdoor leaders may lean towards care-centered actions, which may signal an emphasis on maintaining relationships. This lack of significant difference between genders continued for each question. Women tended to use care more often then men did for a justification for their actions. Men tended to use virtue justifications more than women did. This may indicate that while men and women, in this study, both favor care-centered actions, they may have different motivations behind their behaviors. Gilligan (1982) said that men and women have different ways of reasoning morally. This study seemed to show that outcomes for the genders can be similar even if the justifications behind their reasoning are different. It would make sense that in training programs and in debriefing after trips that leaders would be asked to relate why they made decisions as a way to more clearly understand the moral reasoning of the leaders.

These data support that people are more caring when they believe that the being that needs help is not at fault for the predicament. In general, more caring and more reciprocity justifications were indicated when the situation implied that the porcupine was not to blame for its homelessness. Natural disasters and the September 11 terrorist attacks are examples where outpouring of help may be attributed to caring, wanting reciprocity, and seeing the victims as innocent. This also presents an ethical problem, namely that the outdoor leaders in this study may judge whether a participant ought to be helped in relationship to the leaders' judgment of the participant's fault in a situation. One respondent commented, "Throw the porcupine out … they are enabling him to be irresponsible by helping him out of a tough situation he created." One the other hand, another leader thought to wonder, "Because he did not prepare for winter the same way that the moles did should not be a category for denying him safety from impending winter. Also we do not have enough information as to why the porcupine did not prepare a home. Is the porcupine lazy in reference to the moles…". The second response indicates a willingness to suspend judgment. Leaders' judging behavior has practical implications both for training and supervision needs.

If the possibility of death is raised, these outdoor leaders prefer care-centered actions. Over 90% would accommodate the porcupine. Still, for this question, this is less than the percent of students in an undergraduate business and professional ethics class who would choose care-centered actions (Manning, 1992). This may imply that a few of these outdoor leaders do not see death as something to prevent if there is risk of injury to self. One respondent said, "Throw him out, you can't risk your own safety to save another." This too, has training and supervision implications. While most outdoor leaders have been taught not to save a drowning person, if it might mean drowning oneself, one would want to be sure that outdoor leaders used as accurate judgment as possible when making these sorts of assessments. This includes being able to accurately assess their participants' abilities and their own abilities. Actually, outdoor leaders who saw themselves with a professional class identity now would be less likely to use care-centered actions if they thought a being was going to die than if they thought the being was not to blame. While this difference was not significant, the results may have training and supervision implications. As mentioned above, the leader's judgment of the participants' culpability in a situation seems to influence the leader's use of care-centered actions. More research is needed to see if this possible tendency to judge behavior had safety implications for adventure trips.

Outdoor leaders in this study with a birth identity of service class or an identity now of service class tended to be more likely to use care-centered actions and care-centered justifications than outdoor leaders in this study from a professional class birth identity or that same identity now. This difference was seen in the responses to every question in the Manning Instrument as well as the DIT-2 results. These results are significant in that they may imply that role identity may have an important relationship to whether or not an outdoor leader chooses a care-center action. For this study, class identity was purposefully designed to be self-identified. A person's identity speaks to one's beliefs about oneself. Research has shown that a person's perception of his or her role identity to be very central to his or her professional ethics (Bebeau et al., 2002). Bebeau et al. (2002) found that when people are referred for courses in dental ethics because of violations of the dental practice act, they have been unable to articulate the key expectations of the role of a dental professional. After completing a course designed to help with understanding the moral role of a dentist, role identity increased, moral development scores increased, and violations decreased. This is akin to outdoor leaders developing a concept of what the role of a professional outdoor leader is. Implied by Ewert and McAvoy (1999) and also pointed out by Bebeau et al. (2002) an objective in an ethics curriculum or training program for leaders is to help socialize students to a professional identity that goes beyond technical expertise and good business acumen toward an identity that has a positive impact on moral behavior. People who have acquired a service identity may have a sense that their role includes helping to create a more caring atmosphere.

Outdoor leaders who identify with a service ethic may be more relationship focused and compassionate than outdoor leaders with working class of professional class identities. Manning (1992) hypothesized that Nodding's notion that care was learned might be in operation in this case. People who grew up in a family where their parents worked in service areas may have seen their parents model accommodation and compromise behavior and may have learned the value of care. In general, they may also have received and practiced more caring behavior in their homes than people from other class backgrounds. For example, some respondents suggested using the porcupine's underbelly for warmth and had other suggestions for accommodation. In situations where compromise is challenging, problem-solving skills involving compassion are important for outdoor leaders. Outdoor leaders can be in high-risk situations requiring the leader to think well and quickly to solve a problem in a manner that brings everyone home.

Parents were distinct in their initial reaction as being the least likely subgroup to accommodate the porcupine. This subgroup also had the highest percentage of respondents that changed their response after reflection. The results of this study were different from Manning's results regarding parental status. She had thought that parents might be more likely to use care-centered action because they were parents (1992). This study did not show that. Rest et al. (1999) distinguishes between macromorality and micromorality. When people are more focused on micromorality they pay more attention to the welfare of their family and friends than the impact of their actions on the greater society. Parents in this study seemed to focus on mircromorality. One might think that being a parent might inspire caring, or that it might influence people to "take care of their family first." In this population the latter explanation may have been in effect. Another possible reason for these results is that parents are under stress and tend to say "no" or take a more justice-centered stance at first.

The data from these two instruments show a tendency for the outdoor leaders in this study to exhibit care-centered actions that seemed to complement (not interfere with) a post-conventional social justice frame of mind. Fox and McAvoy (1998) found that caring and justice were the two values that surfaced most often, either individually or intertwined with other value concepts. They also found that some ethical frameworks outdoor leaders use might conflict with one another. This study shows that there may be some situations where this group of outdoor leaders may prefer to use an ethic of care (when a life is in danger) and some situations (when they think a being is at fault) where they may use a justice ethic. Care-centered or justice-centered behavior also can be part of another tradition (such as the Aristotelian idea of virtue, the normative and utilitarian approach, the pragmatic criteria, and feminist ethical concepts related to care and marginalization, which are interwoven with spiritual concepts from the Christian and Buddhist traditions and aboriginal and indigenous perspectives).

Like Manning (1992) this study tested a number of variables not with the purpose of settling issues about moral development and decision making, but rather to give training direction and offer future direction for research.

Training Implications

While more research is called for, this contribution already offers implications for training and other practical applications:

- Outdoor leaders may need additional training in understanding the impact of their judgments of blame on their leadership and their use of care-centered or justice-centered actions.
- Outdoor leaders may need additional training in assessing their own and their participants' physical capabilities, especially where wilderness dangers and risk are concerned.
- Outdoor leaders may benefit from interventions designed to increase moral development through the understanding of the role of a professional outdoor leader. This may be especially true for outdoor leaders who have not completed graduate school degrees or outdoor leaders who do not have a service class identity.
- Outdoor leaders may benefit from additional training in service leadership and the service aspect of leading trips. Understanding the role of the profession through training may be important in helping outdoor leaders understand their

role in managing and working with group dynamics and other interpersonal workings on trips.

- Outdoor leaders may benefit from further training in understanding the informal mores that have been handed down through the years.

Limitations of This Research

The results of the study are valid for this study population. Some generalizations may be made with caution; however, more studies to confirm these results would add strength to the research pool. While an N=62 is enough to get an idea of the moral reasoning skills and choice of care- or justice-centered actions, it is not enough to reliably test all the variables. To that end, future studies targeting subpopulations may be helpful.

Participation in this study required filling out two survey instruments. People are very busy and therefore possibly a certain type of person self-selected for this study (one that had the time and inclination to fill out the surveys).

Implications and Recommendations for Further Research

As Rest et al. said, "Successful research is never final or completed. One solid finding leads to further questions, conjecture, and theorizing, which in turn lead to fruitful new theories and new findings" (1999, p. 99). This research has provided some responses to the study questions and illustrates the need for further research in the area of ethical frameworks used by outdoor leaders in decision making.

All the variables examined during this study could benefit from further examination with a larger population of leaders. In this study there were too few people in any age group (even when clumping respondents) to make any remarks about how age relates to care- or justice-centered actions and justifications for this population. To that end surveying a larger group of outdoor leaders or targeting a specific age group for a study would be useful. The same situation is true for the variable "length of time as an outdoor leader." Looking at "length of time as an outdoor leader" might shed some light on the informal chains of ethical information that operate for outdoor leaders.

Additionally, the majority of the outdoor leaders in this study were college graduates and more than 50% had completed graduate degrees. A future study might want to concentrate on outdoor leaders who have not completed graduate school. Formal education has been found to increase one's use of Post-conventional arguments. The sample used in this study may over-represent outdoor leaders who have completed graduate school. Additionally, a more in-depth analysis of parental status and its affect on use of care-centered actions should be completed.

A more in-depth analysis of class identity and its affect on use of care-centered actions should be undertaken. This study showed several tendencies regarding class identity. One tendency shown was that birth class identity and class identity now may impact an outdoor leader's use of care-centered actions, their justifications, and the situations in which they choose to use care-centered actions.
More research about the association of demographics to moral reasoning perhaps could help guide-training programs.

SUMMARY

If an ethic of care could be said to house the voice of compromise and accommodation (with a good dose of ethical imagination), then I would conclude that many of the outdoor leaders in this study use an ethic of care.

These outdoor leaders, when faced with an initial decision, use higher care-centered actions then previously reported by Manning (1992). Upon reflection, even a higher percentage of outdoor leaders use care-centered actions and when the being is not to blame for the situation or if the being might die if not helped, care-centered actions also increase. If a situation becomes more life threatening, as a group, care-centered actions increased, though this tendency did not hold true for outdoor leaders in this study who see themselves as having a professsional class identity now. If compromise is implied impossible, care-centered actions drop significantly for the outdoor leaders in this study.

These data support that for both female and male outdoor leaders, in this population, care seems to be integral in their ethical frameworks. It does support that women's intent or justifications for their actions are different than men's justifications.

The subgroup of outdoor leaders from this study with either a service birth class identity or a service class identity now showed significantly higher use of care-centered actions and had the strongest relationship to care justifications for decision making throughout the study.

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META-ANALYTIC RESEARCH ON THE OUTCOMES OF OUTDOOR EDUCATION

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INTRODUCTION

Are people any different after participating in challenging adventure activities? Which programs or participants have the most dramatic effects? What are the effects of outdoor education (OE)? Such questions have attracted animated discussion since modern forms of OE started appearing over 50 years ago.

Typically, the effects of OE have been in the form of testimonial support, anecdotal examples, and passionate rhetoric. For example, the promotional material of OE organizations invariably communicates highly positive claims and examples, OE instructors' verbiage with clients exhibits highly optimistic and positive hopes, and a surprising amount of so-called academic work has a clear tendency to uncritically promote the view that OE programs are good things for people.

For most OE advocates the ready-at-hand, ad hoc evidence is sufficient to support their enthusiastic claims about OE. Indeed, the smile when a participant conquers a challenge and the glowing words spoken during a debrief are often compelling. But is it enough to let such evidence speak for itself?

A list of claims about the effects of OE would be very long. Yet for most advocates of OE, what they have personally seen, heard and felt provides sufficient evidence for many wider claims.

Such a critique of OErs may seem harsh. But professional OErs should know more about research results, as should all stakeholders in OE programs and related fields of endeavor, including researchers of OE. To date, however, there has been a lack of high quality research reviews that have been written for both researchers and practitioners. Thus the current article undertakes to compare and summarize the findings of empirical outcome research on OE and related programs for both general audiences.

Initially this paper overviews two ways of measuring outcomes, then describes the use of meta-analysis as a method for objectively summarizing pre-post empirical research results, and finally provides recommendations for future OE research and evaluation studies.

WAYS OF RESEARCHING OUTCOMES

Post-program surveys historically have been a prevalent way that OE outcomes have been researched. Researchers often directly asked participants at the end of a program something like "How valuable was this program for your personal growth?" On face value this approach has appeal. In a recent survey of the practices of over 100 Australian outdoor educators approximately 80% reported that their program used written end-of-program surveys, or "happy sheets" as they are known colloquially (Richards, Neill, & Butters, 1997). However, such evaluations are notoriously problematic indicators of program effectiveness. For example, a study by Neill, Richards and Badenoch (1997) found little relationship between staff and participants' ratings of amount of personal growth experienced by participants (correlations between .2 and .4). Similarly low correlations were found between participants' end-of-program self-reports and their pre-post changes on reliable, psychometric questionnaires.

End-of-program reports of the impact of the value of an experience can be one valuable source of evidence. However, post-hoc reports are vulnerable to many potential distortions. For example, scores can be inflated by post-group euphoria (Marsh, Richards, & Barnes, 1986), post-purchase rationalization (or post-commitment justification), group think, and other problems related to difficulties in validity of remembering, understanding, and then accurately reporting on what happened during an experience and resultant effect on one's psyche. Disparities between different ways of assessing intervention programs can be another source of distortion. For example, in a review of management training research, it was claimed that the "reaction of trainees bore no relationship to the effectiveness of the training" (Bright, cited in Lawson, 1997, p. 7).

To date very little research has explored the relationships between what stakeholders, such as staff and participants, say about a program's value and other indicators of the program effectiveness. Thus, the validity of post-experience ratings remains an area for further investigation.

A second major approach to examining the effectiveness of OE has been to gather participants' self-perceptions (or observer perceptions) before and after a program and then test for any differences. Hundreds of empirical evaluation studies have utilized the basic pre-post design or its variations. Such studies have used a wide variety of dependent measures (e.g., self-esteem, locus of control, etc.) and have been conducted on several different types of programs. The validity of this approach depends on important factors such as the quality of measurement tools, the use of control or comparison groups, and whether followup testing is conducted (Campbell, & Stanley, 1963).

The variety in methods and measures of OE pre-post outcome research makes the task of reviewing the literature formidable. Several notable reviews of the empirical research exist (e.g., Barrett & Greenaway, 1995; Burton, 1981; Crompton & Sellar, 1981; Ewert, 1982; Gillis, 1992; Gillis & Thomsen, 1996; Godfrey, 1974; Iida, 1975; Reddrop, 1997; Richards, 1977; Shore, 1977); however they have all faced difficulties in presenting a systematic overview of the outcome research. Perhaps an indicator of this problem is that only one review has been published in a peer-reviewed journal (Crompton & Sellar, 1981); and that article is over 20 years old.

One of the main difficulties faced by these reviews has been the effective synthesis and systematic summaries of the empirical findings from the variety of studies. Cason and Gillis (1994) described the problem as "the number of research endeavors in adventure programming has grown so large that qualitative literature reviews (like annotated bibliographies) are no longer sufficient tools for understanding the strengths and weaknesses of trying to measure change that results from adventure programming" (Cason and Gillis, 1994, p. 40).

Since the 1980s, a new, systematic review method appeared in the form of meta-analysis. Meta-analysis provided a method for entering the empirical results reported by different studies into a central database that is then analyzed and summarized. Well conducted meta-analyses allows for more objective appraisal of the outcome evidence, which can lead to clearer understanding about the nature of OE's impacts on participants. To date, five meta-analytic reviews of OE and related outcome literature have been conducted.

Understanding Meta-analysis

Meta-analysis is a statistical technique for accumulating and representing the research results reported in various studies. Meta-analysis pools the findings about a single research question from many different sources and analyzes the overall effects.

Meta-analysis results are reported in terms of effect sizes (ESs). An ES, as used in this article, is a measure of how much difference existed between ratings at two different points in time (e.g., before and after an OE program). In essence, the ES indicates the quantified *amount of change*. For general interpretation, an ES of 0 means no change, a negative ES means a reduction for a measured outcome, and a positive ES means an increase in a measured outcome. ESs are also proportional. For example, an ES of .40 represents twice as much change as an ES of .20.

Various experts have offered suggestions about the meaning of different ESs. For example, an ES of .50 is a change of practical significance while .25 is educationally significant

(Wolf, 1986). Cohen (1977) suggested that .2 was small, .5 moderate, and .8 large. Other authors have warned against global guides to interpreting ESs since who and what is being measured needs to be identified before a genuine assessment about the value of a particular ES is made.

In practice, a small ES can be very impressive if, for example, the outcome is difficult to change (e.g., a personality construct) or if the outcome is very valuable (e.g., an increase in life expectancy). On the other hand, a large ES does not necessarily indicate any practical value in the change, particularly if it isn't related to the aims of the intervention (e.g., political orientation).

Meta-analysis as a review method is not without its critics. Criticisms tend to fall into two categories (Bangert-Drowns & Rudner, 1991). Some researchers complain that meta-analysis obscures important information by averaging numerical representations across studies. Other researchers argue that research is best reviewed by a reflective expert who sifts through research and develops kernels of insight from the array of argumentation in a field. Thus, there are advantages and disadvantages to both traditional style and meta-analytic reviewing. An ideal reviewing method might involve making use of both meta-analytic methods and traditional review methods.

Meta-analytic Outdoor Education Research

Five meta-analyses of the effects of OE and related programs have been conducted (Bunting & Donley, 2002; Cason & Gillis, 1994; Hans, 2000; Marsh, 1999; Marsh, H. W., Neill, & Richards, 1997). The studies vary considerably in their scope and focus (see Table 1). The major study (Hattie, Marsh, H. W., Neill, & Richards, 1997) included 96 studies that represented over 12,000 youth and adults and coded for pre-program effects, program effects and post-program effects. Cason and Gillis (1994) conducted the first OE meta-analysis, based on pre-post outcomes reported in OE research with adolescents (43 studies). Most of the studies in the Cason and Gillis (1994) study were included in the Hattie et al. study (1997), hence the results of the two studies are generally consonant.

The other three OE meta-analyses reviewed the pre-post outcomes for particular types of programs. Marsh (1999) focused on the impacts of American camping programs. Hans (2000) focused on the effects of adventure programming on locus of control outcomes. Bunting and Donley (2002) focused on the effects of ropes/challenge course programs on teamwork, self-concept, and self-esteem outcomes.

The five OE meta-analyses reported that OE programs have small-moderate effects (see Table 1). The lowest average ES (.20) was reported for American camp programs (Marsh, 1999) and the highest average ES (.55) was reported for ropes/challenge courses (Bunting & Donley, 2002). For the other studies, Hans (2000) reported an ES of .38, Hattie et al. (1997) reported .34, and Cason and Gillis (1994) reported .31. The findings for the larger studies and the ones focused on OE programs (i.e, Cason & Gillis; Hattie et al., 1997) suggest overall ESs between .3 and .4. By broader educational and psychological standards these changes are considered a small-moderate amount of change (Cohen, 1977).

Camping programs' seemingly low ES of .20 may not be unexpected, given that not all camps aim to enhance campers' personal and/or social development. Indeed, camping programs that had a personal development philosophy had an ES of .41. It should also be noted that Bunting and Donley's (2002) relatively high overall ES of .55 for ropes/challenge courses was based on only 15 studies, and these studies exhibited a wide range in ESs. Further undermining the reliability of this study was the strong negative relationship between quality of study and size of outcome; in other words, poorer quality studies tended to have higher ES, a finding also reported by Cason and Gillis (1994).

In summary, a reasonable consensus amongst the five OE meta-analyses is that OE programs have a small-moderate impact for typically measured outcomes such as self-esteem, behavior problems, and teamwork. In an attempt to be more precise, Hattie et al. (1997)

TABLE 1
Overall Results from Five Meta-analyses related to Outdoor Education

Study	Focus	*d*	*N studies*	*N effects*	*N participants*
Cason & Gillis (1994)	Adventure programming for adolescents	.31	43	147	~7,030
Hattie et al. (1997)	Adventure education and Outward Bound programs	.34	96	1,728	12,057
Hans (2000)	Adventure programming locus of control outcomes	.38	24	30	1,632
Marsh, P. E. (1999)	Camping programs	.20	22	37	na
Bunting & Donley (2002)	Ropes/Challenge Courses	.55	15	na	na

reported that their results suggested that 65% of participants were better off for having participated in OE programs.

A major question of outcomes is how long the effects of outdoor education programs last. Hattie et al., (1997) examined the long-term effects of OE programs and reported an *additional* ES of .17 for assessments up to 18 months after the end of the program. This finding means that the average program ES of .34 is followed by an average ongoing improvement of .17, suggesting a moderate overall ES of .51. This evidence indicates that OE participants experience additional growth on returning to their home environments. Despite wide ES variations between different studies, Hattie et al. (1997) noted that the additional .17 is impressive because longitudinal education and training research generally shows a loss over time of immediate program benefits. However, it should also be noted that much of the research for these long-term results was based on Outward Bound expedition-style programs, thus the generalizability of the finding is limited.

MAIN OUTCOMES OF OUTDOOR EDUCATION PROGRAMS

While overall outcomes are useful as a general guide, detailed information about the effects is needed. Hattie et al. (1997) grouped the results into six broad categories: leadership, self-concept, academic, personality, interpersonal, and adventuresome (see Table 2).
The pre-post program ESs for each of Hattie et al.'s (1997) six categories were statistically significant. Interestingly, while the smallest program ES was for self-concept (.28), the largest follow-up ES was for self-concept (.23). This finding may indicate a sleeper effect whereby self-concept changes in particular are begun during a program and then continue to unfold long after program completion.

The ESs reported by Cason and Gillis (1994) for programs with adolescents were placed into seven categories: behavioral assessment by others, self-concept, academic, attitude, locus of control, clinical scales, and school attendance (see Table 3). A very high ES (1.05) was found for studies that used clinical measurement scales. This finding could be due to the fact that clinical scales are mainly used for researching specialized and intensive OE programs for participants who have emotional, behavioral or psychological difficulties. Such programs tend to utilize a more highly disciplined and individualized approach than is usually the case in programs with a personal development, educational or recreational emphasis. High ES for therapeutic and/or behavioral problem clients may also be due to the clients having greater room for growth than average OE program participants. The results for the other six categories of outcomes reported by Cason and Gillis (1994) ranged between .30 (locus of control) to .61 (academic).

Hans (2000) focused exclusively on locus of control, and this study largely corroborated the findings of Cason and Gillis (1994) and Hattie et al. (1997) for small to moderate shifts towards an internal locus of control. Marsh (1999) focused on outcomes for self-constructs (mostly self-esteem and self-concept). Bunting and

TABLE 2

Effect Sizes (ESs) by Outcome Category reported by Hattie et al (1997)

Category	Description	Program ES (*N*)	Follow-up ES (*N*)
Leadership	Conscientiousness, Decision making, Leadership, Organizational ability, Time management, Values, Goals	.38* (222)	.15 (58)
Self-concept	Physical ability/appearance, Peer relations, General, Academic, Confidence, Self-efficacy, Family, Self-understanding, Well-being, Independence	.28* (271)	.23* (149)
Academic	Mathematics, Reading, Grade Point Average (GPA), Problem solving	.46* (30)	.21 (9)
Personality	Femininity/Masculinity, Achievement motivation, Emotional stability, Aggression, Assertiveness, Locus of control, Maturity, Neurosis reduction	.37* (235)	.14 (76)
Interpersonal	Cooperation, Interpersonal communication, Social competence, Behavior, Relating skills, Recidivism	.32* (176)	.17 (36)
Adventuresome	Challengeness, Flexibility, Physical fitness, Environmental awareness	.38* (69)	-.06 (19)

Note. * $p < .05$

Donley (2002) reported results for three main outcome categories: team development (ES = .58), self-concept (ES = .23) and self-esteem (ES = .16).

Roughly, the small-moderate average ES finding applied to different outcomes categories, with the notable exception of clinical scales in the Cason and Gillis (1994) study. The largest follow-up effects appeared to be in the area of self-concept. The overall effects suggested enhancement of self-related constructs, action-orientation, and coping behaviors.

Are All Outdoor Education Programs Effective?

According to Hattie et al. (1997, p.77), OE programs "can obtain notable outcomes and have particularly strong, lasting effects. It is clear, however, that adventure programs are not inherently good. There is a great deal of variability in outcomes between different studies, different programs, and different individuals." This theme of wide variability in the ESs was also evident in the Cason and Gillis (1994, p. 46) meta-analysis: "When one considers the large range of effect sizes collected, -1.48 to 4.26, and the wide variation in the findings, a singular summary effect size...cannot adequately reflect the effectiveness of adventure programming."

Other research reviews have come to similar conclusions about variability in outcomes. Burton (1981), for example, reviewed 161 OE studies and reported that 38% had "mostly positive" outcomes, 26% had "some positive" outcomes, 34% had "non-significant" outcomes, and 2% had "negative" outcomes.

This variability in outcomes between programs is a striking feature in the OE research and warns against accepting false comfort from the small-moderate average ESs. Hattie et al. (1997, p.70) emphasized that "only some adventure programs are effective, and then on only some outcomes, and it is probable that only parts of the programs are influencing these outcomes."

Moderators of Outdoor Education Outcomes

Meta-analytic methods of summarizing research can be used to consider the effect of moderator (or process) variables on outcomes. The meta-analytic studies have examined the influence of program length, participant gender, participant age, participant type (e.g., delinquent, management, gender mix of group (all male, all female, co-educational), nature of program (e.g. sailing, wilderness), organization running the program, and quality of the study.

Hattie et al. (1997) found that 36% of the variance in outcomes could be explained by these moderating factors. Outcomes were most influenced by the organization running the program (Outward Bound Australia, ES = .47; all other OE programs, ES = .17), program length (programs greater than 20 days, ES = .41; less than 20 days, ES = .23), and age of participants (adults, ES = .38; students, ES = .21).

Cason and Gillis (1994) Bunting and Donley (2002) found that the quality of the study had an impact on the outcomes, with lower quality studies reporting higher ESs. These findings should warn researchers to be wary of using instrumentation and designs that are below par since they may inflate results. This concern becomes even more important in the light of how few programs use high quality assessment tools. According to a recent survey (Richards, Neill, & Butters, 1997) only 7% of outdoor educators reported that their programs utilized standard tests as part of their evaluation strategy.

Hattie et al (1997) and Cason and Gillis (1994) reported a weak but positive relationship between program length and the size of outcome, and Bunting and Donley (2002) reported a correlation of .28 between the length of ropes course programs and outcomes. Hans (2000) did not report any effects for program length, and length was not used by Marsh (1999). Overall, OE program length explains a small but consistent amount of variance in participant outcomes.

With regard to the effect of participant age, stronger outcomes were found by Cason and Gillis (1994) for younger rather than older adolescents. This negative correlation between age and outcome was also found for the camping studies (Marsh 1999). This finding is consistent with other research that suggested older adolescence is a period during which self-concept is somewhat resilient to change (e.g. see Hattie, 1992). However, the strongest outcomes of all were found for adult-aged participants (Hattie et al., 1997), although Bunting and Donley (2002) found linear effects of age on ES, from school-age, through college-age to corporate client-age.

Hans (2000) found two significant influences on locus of control outcomes. Firstly, programs that had therapeutic goals as their primary purpose had higher ESs than programs with goals such as recreation. This finding seemed to be consistent with Marsh, P. E.'s (1999) finding that camps with a self-development philosophy achieved a reasonably high ES, whereas for camps without such a philosophy, participant changes were negligible. These findings lend credibility to the possibility that organizational mission and culture were a critical factor underlying program effects and could explain the strong ESs that have been reported for Outward Bound programs in Australia (Hattie et al, 1997). The second significant moderator from the Hans (2000) study was that residential and semi-residential programs were more effective than sessional programs that utilized adventure activities but did not take participants away from their familiar environments overnight.

In summary, the main influences on empirical OE research outcomes were the OE organization running the program, the age of participants, and the length of program. Other moderators of note were quality of study and whether the program was residential. Overall, the results of OE program research showed small-moderate average effects that varied considerably from participant to participant and from program to program.

OUTDOOR EDUCATION OUTCOMES COMPARED TO OTHER INTERVENTIONS

Research on many educational, training and therapeutic intervention programs provide useful comparisons with OE outcomes. The most famous meta-analytic study (based on 475 studies) reported an average ES of .70 for psychotherapy (Smith, Glass & Miller, 1980). While this finding was noticeably greater than the average OE ESs, one should note that psychotherapy tends to

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TABLE 3
Effect Sizes (ESs) by Outcome Category reported by Cason and Gillis (1994)

Category	**Program Effect ES (*N*)**
Behavioral assessment by others	.40 (23)
Self-concept	.34 (23)
Academic	.61 (10)
Attitude surveys	.46 (19)
Locus of control	.30 (13)
Clinical scales	1.05 (12)
School attendance	.47 (9)

be conducted with a different clientele than is normally found in OE programs.

Another useful comparison was Lipsey and Wilson's (1993) meta-analyses on psychological treatments that represented over one million participants. The overall ES was moderate (.47), with 83% of the reviewed meta-analyses finding ESs over .20. Lipsey and Wilson stated that "little in conventional reviews and past discussions of these treatment areas, either individually or collectively…prepares a reviewer for the rather stunning discovery that meta-analysis shows nearly every treatment examined to have positive effects" (p. 1192). The Lipsey and Wilson study provided OE programs with a useful comparative benchmark, particularly for OE programs that seek recognition for effecting psychological changes.

Another comparison can be made with non-OE programs designed to enhance self-concept. Hattie (1992) conducted a meta-analysis of 89 self-concept enhancement studies and found an average ES of .37. This ES represented an average of outcomes for self-concept change programs such as psychology courses, behavior therapy, cognitive therapy, and client-centered counseling. An ES .37 for non-OE self-concept program changes is similar to OE programs. As with the OE meta-analyses, however, the Hattie (1992) study of non-OE program effects found large variations depending on the type of intervention program.

RECOMMENDATIONS

On the basis of the research reviewed, three main recommendations emerged for future research and evaluation in OE. First, future research should describe the program's methods in more detail. Second, investigation is needed on the influence of individual differences on outcomes. Third, ES benchmarks should be used in program evaluation studies.

All five OE meta-analyses were consistent in calling for future research to provide more details about the educational methods used in the program being investigated. The lack of methods information in the primary empirical studies limited the extent to which meta-analysis could analyze process variables. A lack of more detailed information about program features such as program philosophy, type of activities, instructional techniques and facilitation style, instructor experience, program difficulty, weather, environment, group sizes, activity sequencing, and methods for dealing with behavior problems was noted. Given the wide variation of outcomes between different types of programs, it is critical that future research document in much greater detail the nature of the programs being conducted. An argument can be made that future empirical studies be treated as mixed mode studies with in-depth qualitative descriptions of the program process. Other intervention research areas, such as psychology, provide limited information, because they use standardized treatment regimens. However, OE programs often lack reliable documentation of program processes. In future research, greater attention must be given to OE programming methods.

Meta-analytic findings to date have provided little insight into the phenomenon of individual differences that influenced OE participant outcomes. Research reviews have struggled to identify and provide models of relevant participant characteristics and processes that significantly influenced the nature of their experience and learning. The lack of definitive evidence about causes of individual variations in outcomes may signal a need for different lines of investigation. Two recent studies have illustrated some possible solutions to this problem. Fry and Heubeck (1998) examined the effects of personality on the mood states of participants in Outward Bound programs and found that extroverts and introverts had noticeably different mood patterns during the different phases of the program. Neill and Heubeck (1998) found that school students who reported using productive coping skills (such as 'focusing on the positive,' 'working hard,' and 'solving the problem' experienced greater mental health benefits from OE programs than those who reported using non-productive coping skills (such as 'self-blame,' 'worrying,' and 'ignoring the problem'). These two studies suggested that research on individual differences, such as personality or coping styles, may enlighten a path towards developing more effective, individualized programming in OE.

The reporting of ESs has utility beyond meta-analysis. Reporting of ESs is now considered a standard part of empirical reporting (American Psychological Association, 2001). ESs allow for comparative quantification of program effectiveness. Program evaluation results can be compared with internal benchmarks (e.g., compare this program to last year's program) or external benchmarks (e.g., compare this program with typical effects for OE programs or for other types of intervention programs). An important contribution of such comparisons can be to provide feedback about a program's relative strengths and weaknesses. This valuable diagnostic information can help identify areas for possible improvement and particular strengths of the program.

CONCLUSION

After five decades of modern day OE, the empirical outcome research has been synthesized. On average, OE programs appeared to have small to moderate effects on participants' self-perceptions of personal qualities and capabilities. This finding is similar to the average outcome for psychological training and other types of educational self-concept change programs. These results provide scientific support that OE programs, on average, provide legitimate and effective educational training. OE methods seem to have something genuine to offer education, training, and psychology. A particularly impressive strength is that OE programs seem capable of triggering an ongoing cycle of positive change within participants.

However, readers should be warned against the comfort of average results. Some OE programs are much less effective than other OE programs. OE is not a panacea. Many programs that claim to deliver personal development through the outdoors may be ineffective and almost all programs could be substantially improved if the outcomes of psychological interventions and psychotherapy were accepted as reasonable benchmarks. Unfortunately, most OE programs do not conduct systematic, rigorous evaluations of program effectiveness, nor are the methodologies of various OE programs well described and available for public dissemination. For the programs that conduct some evaluation, disturbingly few use standardized testing instruments and too many rely on end-of-program written surveys as indicators of their effectiveness.

Further OE meta-analyses would provide useful comparisons of evaluations that are completed. The Hattie et al. (1997) study needs to be updated. In addition, meta-analytic studies of specific aspects of OE programming, such as adventure therapy, would be useful. For example, a meta-analysis of adventure therapy programs could be conducted, as could a meta-analysis examining the influence of different facilitation techniques on participant outcomes. OE scholars might also consider other innovative research review methods. For example, a central electronic database of primary OE research data could be developed to allow powerful secondary and cumulative analyses.

It is no longer sufficient for OE advocates to simply believe in the benefits of OE or to accept anecdotal evidence at face value. Instead, all available tools should be used in order to understand the effects OE programs have on participants and how the best possible learning experiences can be provided.

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MULTIDIMENSIONAL SELF-CONCEPT AND OUTDOOR ADVENTURE EDUCATION WITH ADOLESCENTS

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INTRODUCTION

With the goal of educating the "whole" student, including a student's self-concept and self-esteem, schools are searching for and initiating programs and activities to enhance self-concept (i.e., the perceptions one holds about him or herself), especially with adolescents (Shavelson, Hubner, & Stanton, 1976; Neill, 1997). Many of these programs designed to increase self-concept, or those that hold increased self-concept as a given outcome of their program, are offered for adolescents in the context of traditional academic settings such as high schools and colleges (Finkenberg, Shows & DiNucci, 1994; Gillett, Thomas, Skok, & McLaughlin, 1991; Kaplan, 1974; Lambert, Segger, Staley, Spencer & Nelson, 1978; Wilgenbush & Merrill, 1999). Additionally, programs specifically aimed at increasing the self-concept of specific populations (i.e., youth at risk, adjudicated youth, females, people with disabilities, traditional high school students, and members of various ethnic minority groups) have been implemented and studied. These programs have used a number of approaches based on several theoretical models that affect adolescent self-concept, and research studying the outcomes of these programs has reported mixed results (Hattie, Marsh, Neill & Richards, 1997; Hazelworth & Wilson, 1990; Luckner, 1989; Marsh & Richards, 1988; Marsh, Richards & Barnes, 1986, 1987; McDonald & Howe, 1989; Minor & Elrod, 1994; Neill, Rawson & McIntosh, 1991; Wilgenbush & Merrill, 1999).

Outdoor adventure education programs use experiential activities such as backpacking, rock climbing, canoeing, and other outdoor recreation activities to achieve various goals and objectives, one of which is the improvement of self-concept. However, as the implementation and popularity of these self-concept enhancing programs increase, there is much controversy regarding the impact and efficacy of these programs. Wilgenbush and Merrill (1999) note there has been particular debate on the differing effects of these programs on males and females. Many studies examining impacts of these programs on self-concept are over 10 years old; today's adolescents live in a much different world. Youth today are exposed to events and circumstances that may affect their self-concept at a much earlier age than adolescents in the past. Exposure to mass media and the internet has added to this phenomenon.

The research methods used to examine these programs and the changes in self-concept have been questioned (Hattie, et al., 1997). Some studies examining self-concept and outdoor adventure education were based on one-dimensional theoretical models of self-concept, had limited statistical power due to small sample sizes, used flawed statistical techniques, provided no control or comparison group, or ignored independent variables affecting the participants' self-concept (Crain & Bracken, 1994; Delugach, Bracken, Bracken & Schicke, 1992; Harter, 1986; Hattie et al., 1997). Neill (1997) recognized several additional shortcomings of the existing research regarding outdoor adventure education, including improper generalization of results from one type of program to other programs (e.g., Outward Bound, traditionally a 21-day program designed to provide individual and group challenges using the outdoors as a medium, to traditional school programs), variable outcomes between programs of the same type (e.g., different Outward Bound schools), scarcity of research on non-Outward Bound programs, and lack of research on programs lasting less that 14 days.

The examination of short-term programs not associated with Outward Bound programs is needed. Further, the use of traditional high school students as research participants is needed as programs serving this population continue to grow in popularity (Neill, 1997). Additionally, the use of covariates, such as previous experience with outdoor adventure activities, current life events that may affect self-concept (e.g., death of a parent/guardian, poor academic performance), risk-taking behaviors, and perception of risk associated with outdoor adventure education activities, is warranted.

Therefore, this study focused on the changes in self-concept of adolescents enrolled in outdoor adventure education courses offered at a traditional college preparatory high school and explored how gender influenced changes in specific domains of self-concept.

Hypotheses

The investigator proposed that adolescents of high school ages participating in outdoor adventure education courses, including at least two overnight outdoor experiences, would have greater changes in self-concept than those students not participating in those courses. The following hypotheses were proposed:

H_1: Students participating in the outdoor adventure education courses would have greater positive change in general self-concept and each of the dimensions of self-concept as measured by the Multidimensional Self-Concept Scale (MSCS) than students not participating in the outdoor adventure education courses.

H_2: There would be significant differences in change in general self-concept and the dimensions of self-concept between males and females participating in the outdoor adventure education courses as measured by the MSCS.

Previous outdoor experience, perception of risk associated with outdoor activities, and current level of risk taking behavior, as well as the baseline MSCS scores, were used as covariates as appropriate. Additionally, self-reported current life events were used to determine if any participant's self-concept was unduly influenced by factors occurring in everyday life (e.g. death of a parent, moving location of residence, facing peer pressure).

LITERATURE REVIEW

Self-concept has been extensively studied by researchers from a variety of fields and is one of the more popular topics of research in psychological studies today (Strein, 1998). Self-concept has been defined as "...the totality of a complex, organized, and dynamic system of learned beliefs, attitudes and opinions that each person holds to be true about his or her personal existence" (Purkey, 1988, p. 1). Contemporary theories of self-concept regard the construct as multidimensional and relating to specific facets of an individual's sense of self (Bracken, Bunch, Keith & Keith, 2000; Marsh, Parker, & Barnes, 1985; Shavelson, Hubner, & Stanton, 1976). Marsh & Shavelson (1985) described the characteristics of a sound model of self-concept as follows:

> 1. It is multifaceted in that people categorize the vast amount of information they have about themselves and relate these categories to one another. The specific facets reflect the category system adopted by a particular individual and/or shared by a group.
> 2. It is hierarchically organized, with perceptions of behavior at the base moving to inferences about self in subareas (e.g., academic—English, science, history, mathematics), then to inferences about self in general.
> 3. General self-concept is stable, but as one descends the hierarchy, self-concept becomes increasingly situation specific, and as a consequence, less stable.
> 4. Self-concept becomes increasingly multifaceted as the individual moves from infancy to adulthood.
> 5. It has both a descriptive and an evaluative dimension such that individuals may describe themselves ("I am happy") and evaluate themselves ("I do well in mathematics").
> 6. It can be differentiated from other constructs such as academic achievement (p. 107).

Models that do not define self-concept in a similar manner are considered unsound, as researchers have proved the existence of these characteristics of self-concept (Bracken, Bunch, Keith & Keith, 2000; Marsh & Shavelson, 1985; Marsh, Parker, & Barnes, 1985; Shavelson, Hubner, & Stanton, 1976).

Modern perceptions regarding gender differences in adolescent self-concept generally have merit. Wilgenbush and Merrell (1999), in their meta-analysis of gender differences in self-concept, reported that those dimensions of self-concept that have significant differences between males and females are relatively small in nature. Crain (1996) reported these differences as having little clinical significance. However, these authors warned that broad generalizations should not omit these small differences in self-concept between males and females.

Most conclusive findings regarding ethnic and racial differences in adolescent self-concept report little or no difference between groups (Aries, Oliver, Blount, Christaldi, Fredman & Lee, 1998; Crain, 1996; Crain & Bracken, 1994; Widamen et al., 1992). Crain and Bracken (1994) state, "Thus, both global and domain-specific self-concepts appear to be relatively impervious to differences among students' ethnic or cultural backgrounds" (p. 504). However, limitations to these studies such as lack of control for socioeconomic status may affect the above conclusion.

Theorists argue that change in self-concept is a result of evaluation stemming from two sources: direct personal experience and interaction with others in a number of environments occurring over time (Bracken, 1992; Crain & Bracken, 1994). Adolescents "... learn specific and generalized response patterns both directly and indirectly through (a) their successes and failures in various contexts, (b) the way others react to their actions, and (c) the manner in which others model behaviors and communicate expectations" (Crain & Bracken, 1994, p. 497). The Environmental-Behavioral Interactive Model (Bracken, 1992) suggests self-concept may be affected by feedback from personal experience, through interaction with others, and through vicarious experiences, all of which are evident in outdoor adventure education programs (Bandura, 1977; Priest, 1993).

Outdoor adventure education courses have been in existence since the early 1940s, when Kurt Hahn introduced Outward Bound (Hattie, Marsh, Neill & Richards, 1997). Over the past 40 years, outdoor adventure education programs have grown in both number and scope (Hattie et al., 1997).

Outdoor adventure education courses are unique in that the participants are removed from their everyday environments. The inclusion of a physical activity, often where the level of risk is perceived by the participants to be greater than it actually is constitutes a defining property of outdoor adventure education courses (Ewert, 1989). Although physical activity is often a major component of an outdoor adventure education course, physical fitness and physical skill development are not inclusively primary goals (Marsh, Richards, & Barnes, 1986).

The combination of self-reliance, exposure to a different environment, and the experience of physical and mental challenges are used to meet the goals of outdoor adventure education courses (Marsh, Richards, & Barnes, 1986). These goals include self-concept, communication, problem-solving skills, academic performance, physical ability, and understanding of humans' role in the natural environment (Ewert, 1987; Gillett, Thomas, Skok, & McLaughlin, 1991; Hattie et al., 1997).

Changes in self-concept resulting from participation in outdoor adventure education courses have been the topic of many studies. However, the populations studied, the methods used, and the results obtained have varied. Early studies (e.g., Kaplan, 1974) focused on programs for males. Others included both males and females, but only compared females in the experimental group to females in the control group (Finkenberg et al, 1994). Although these studies found significant differences in change of self-concept, their findings have limited implications.

A weakness of several studies has been small sample size. For example, Kaplan (1974) examined the impacts of a two-week outdoor program using an experimental group of 10 people and a control group of 25 people. Many studies did not control for other factors that may have affected self-concept. Lambert et al., (1978) noted their participants specifically registered for a course with an outdoor component and indicated this as a possible sign of greater initial levels of self-concept. There may have been little change to detect, as the participants' self-concept was already high. Marsh et al., (1986) did not use covariates in their examination of Outward Bound participants. Other studies used instruments based on the premise that self-concept was a global construct and did not consider the multidimensional, hierarchical nature of self-concept.

Studies that have used instruments based on multidimensional, hierarchical models of self-concept have provided mixed findings. Several researchers have found significant changes in the various dimensions as well as global self-concept (Finkenberg et al., 1994; Gillett et al., 1991; Hazelworth & Wilson, 1990; Marsh et al., 1986). However, the dimensions of self-concept that were affected vary from study to study. Additionally, the magnitude of change varies as well.

Two meta-analyses of outdoor adventure research have provided evidence of the success of adventure programming in increasing the general and domain specific self-concept of adolescents. Cason and Gillis (1994) reported an average effect size of d=.34 for over sixty studies related to self-concept, while Hattie et al., (1997) found average effect sizes of d=.11 to d=.51. Although these indicate small to moderate effect sizes, support for positive change in self-concept is apparent.

Although there have been many studies examining outdoor adventure education programs and adolescent self-concept, these studies do not provide a full picture as to how individuals' self-concepts are affected. The demand for shorter programs and lack of research on these types of programs, the need for sound statistical methods in research related to adolescent self-concept and outdoor adventure education, and limited research on programs not using Outward Bound participants as subjects were evident in the current literature.

METHOD

Participants

Subjects were recruited from a private, college preparatory high school in New York City in September 2000. Students who attended this school were generally middle to upper-middle class, white, and resided in New York City. An announcement inviting students to participate in this study was made by the researcher during the first week of school. Cover letters and informed consent forms were distributed at this time. The researcher returned the following day to collect signed informed consent forms and recruit additional participants. The researcher returned one last time to collect signed informed consent forms.

Some students were enrolled in one of two outdoor adventure education courses offered at this school during this semester. The first course entitled 'Experiential Education' was required of all tenth grade students. The second course, 'Wilderness' was an elective offered to eleventh and twelfth grade students. These outdoor adventure education courses included at least two separate overnight outdoor adventure experiences. These courses were led by the same faculty each time—one male instructor and one female instructor. Other students participating in this study were not enrolled in either of these courses and served as the control group.

Instrument

The Multidimensional Self Concept Scale (MSCS) was used for this study. The MSCS had 150 items and used a four point Likert scale (i.e., Strongly Agree, Agree, Disagree, Strongly Disagree). There were six subscales of 25 items each. These subscales corresponded to the domains of self-concept (Competence, Affect, Family, Social, Academic, and Physical) suggested by Bracken (1992). The MSCS was implemented for this study because it is easy to complete, is based on a multidimensional, hierarchical model of self-concept, and is grounded in self-concept theory that suggests change in self-concept occurs from environmental and behavioral interactions. The MSCS has been found to be reliable and valid (Bracken & Howell, 1991).

Additionally, demographic data, and items related to self-reported risk taking behaviors, previous level of outdoor experience, and perceived risk of outdoor adventure activities were collected.

Research Design and Analysis

A repeated measures analysis of covariance (ANCOVA) was used to determine if there were any significant differences in general self-concept and each of the domains of self-concept between students taking either of two semester-long outdoor adventure education courses and students not taking either of these courses. Additionally, a repeated measures ANCOVA was used to determine if there were significant differences in general self-concept and each of the domains of self-concept between males and females enrolled in the outdoor adventure education courses. Covariates for potential use were: baseline data from the MSCS, previous level of outdoor experience, perceived risk of outdoor adventure activities, and self-reported risk taking behaviors. Data were collected at three points during the fall 2000 semester. The first wave of date were collected during the first week of classes, the second directly before the students enrolled in outdoor adventure education courses began the outdoor component of the course, and the third following the final outdoor experience.

The repeated measures ANCOVA was used as it enabled the researcher to address some of the recommendations of previous authors including lack of covariates, no comparison or control group, and inadequate sample size.

RESULTS

Ninety-four students participated in this study. This represents 40.3% of eligible students at the high school where data were collected. Demographic and descriptive statistics were determined for the sample of 94 students using the Statistical Package for Social Sciences (SPSS) version 10.0. There were a total of 36 high school students (38.3% of the total sample) enrolled in outdoor adventure education courses during the fall 2000. Age and previous outdoor experience are summarized in Table 1.

TABLE 1
Age and previous number of outdoor trips

	Age		Previous number of outdoor trips	
	M	SD	M	SD
Total sample	15.18	1.00	2.85	3.02
Outdoor course	15.31	.71	2.61	2.16
No outdoor course	15.10	1.15	3.00	3.45

For the total sample, there were approximately an equal number of males and females, with 47.9% (n = 45) being male and 52.1% (n = 49) being female. There were more males (n = 25) than females (n = 11) enrolled in outdoor adventure education courses.

A majority of the students (71.3%) indicated their ethnicity as European/Caucasian/White (n = 67). The remaining students reported their ethnicity as follows: 9 (9.6%) were African American/Black, 9 (9.6%) were of mixed race, 7 (7.4%) indicated being Latino/Latina/Hispanic, and 2 (2.1%) were Asian or Pacific Islander.

For the total sample, 91.5% of the students reported having a "B" grade average or higher with the remainder indicating their grade average as "C." No student indicated a grade of "D" or lower.

A majority of the students (35.1%) were in tenth grade (n = 33). Twenty-seven students, or 28.7%, were in eleventh grade, 24 students (25.5%) were in ninth grade, and the remaining 10 students (10.6%) were in twelfth grade. Additional descriptive information may be found elsewhere (O'Connell, 2001).

Hypotheses Testing

All hypotheses were examined using repeated measures ANCOVA analyses. The baseline measure of the MSCS scale was used as the covariate for all hypotheses. Additionally, the baseline measure of Previous Level of Outdoor Experience was used as the covariate when examining differences between Competence Self-Concept of males and females enrolled in the outdoor adventure education courses. The only significant difference found was between males and females enrolled in the outdoor adventure education courses where males had a significantly greater gain in Family Self-Concept. Results are shown in Table 2. Effect sizes ranged from <.001 to .08 (eta^2).

TABLE 2
Results of Repeated Measures ANCOVA

Analysis	df	F
Enrolled in OAE Courses vs. Not Enrolled		
Global Self-Concept	1, 85	.09
Physical Self-Concept	1, 91	.25
Affect Self-Concept	1, 91	2.75
Academic Self-Concept	1, 91	.69
Competence Self-Concept	1, 91	.01
Social Self-Concept	1, 91	.002
Family Self-Concept	1, 91	.16
Females vs. Males Enrolled in OAE Courses		
Physical Self-Concept	1, 33	2.13
Affect Self-Concept	1, 33	.06
Academic Self-Concept	1, 33	.05
Competence Self-Concept	1, 33	.47
Social Self-Concept	1, 33	.68
Family Self-Concept	1, 33	4.01*

*$p < .05$.

DISCUSSION

Increased self-concept has been cited as one of the potential benefits of participating in outdoor adventure education activities (Hattie, Marsh, Neill & Richards, 1997). Previous researchers have found significant changes in Global Self-Concept as well as the domains of self-concept as a result of high school students participating in outdoor adventure education courses (Finkenberg, Snows & DiNucci, 1994; Gillett, Thomas, Skok, & McLaughlin, 1991; Luckner, 1989; Marsh, Richards & Barnes, 1986). This researcher found no significant difference between changes in Global Self-Concept for both female and male high school students enrolled in outdoor adventure education courses and students not enrolled in these courses.

Unlike previous studies, this researcher found no significant differences in any of the domains of self-concept between high school students enrolled in outdoor adventure education courses and students not enrolled in these courses. Other researchers found that students of similar ages to those in this study who participated in outdoor adventure education courses had significant changes in various domains of self-concept, including Physical, Social, Academic, Parents, Problem Solving and Identity among others (Hattie et al., 1997; Lambert, Segger, Staley, Spencer & Nelson, 1978; Luckner, 1989; Marsh & Richards, 1988; Marsh, Richards & Barnes, 1986; McDonald & Howe, (1989).

The nature of the outdoor adventure education courses examined in this study were different than those in previous studies and may have affected the findings. Students in this study participated in two short-term (three days each) outdoor experiences spread over the course of four months. The outdoor experience component of other studies were usually longer in length and of continuous duration. The extent of the outdoor experiences in this study may have affected the lack of change in Global Self-Concept and the domains of self-concept. Longer courses have been found to have greater effects than short-term courses (Hattie et al., 1997). The findings from this study are not unlike those reporting on short-term outdoor adventure education courses (Hattie, et al., 1997).

This researcher found a significant difference in gain in Family Self-Concept favoring males for those enrolled in outdoor adventure education courses. Females have been posited to possess higher self-concepts than males in areas concerning social relationships such as with friends and family. The social interaction needed for teamwork and for the understanding of others that occurs on outdoor adventure education courses may have a greater affect in males' perceptions of their families by allowing them to transfer these experiences to family life.

The activities in which students enrolled in the outdoor adventure education courses participated may have played a role in the findings of this study. Students in the Experiential Education class went on a rock climbing and winter camping trip, whereas the Wilderness class went on a sea kayaking and winter camping trip. Perhaps the difference in activity had an effect on change, or lack of change, in student self-concept. The rock climbers could choose between climbs with varying degrees of difficulty. The students who went sea kayaking were unable to choose the difficulty of the activity, as such factors as waves and wind were uncontrollable. Although the engagement in both rock climbing and sea kayaking is oriented towards individual participation with support from other group members, each activity may be fundamentally different enough to impact self-concept in differing ways.

Covariates

The lack of use of covariates in outdoor adventure education research has been identified as a weakness of previous studies (Hattie et al., 1997). This study collected information from participants for potential use as covariates in the repeated measures ANCOVA.

The lack of significant correlations between Perceived Risk of Outdoor Activities, Previous Level of Outdoor Experience, and Risk Taking Behaviors resulted in the elimination of these variables as covariates in all but one analysis. This indicates the suggestion of Hattie et al. (1997), who recommended future research include variables that may affect the dependent variable under study, need to be examined to a much greater extent. The identification and use of covariates such as self-efficacy, coping mechanisms, activity type, and intensity of experience may be more viable for use in future studies.

Limitations

There are several limitations to this study. First, the use of a convenience sample limits the generalizability of the findings. This study employed high school students from a private school in New York City as participants. Related to this, most of the students were predominately Caucasian and by nature of a private school, of middle or upper middle socioeconomic class. Additionally, most students reported having grades of "B" or higher, generally indicating above-average scholastic ability. These findings may only be generalized to programs of this nature in large, urban environments. They should not be generalized to suburban or rural settings.

The researcher was unable to randomly assign participants to either the experimental or comparison group. However, there was no methodical process used by the school administration to assign students to the fall semester outdoor adventure education courses. Broad scheduling factors were the only factor in determining which semester students would take the outdoor adventure education course. Upper class students voluntarily enrolled in the outdoor adventure education course (i.e., Wilderness). These students were interested in furthering their outdoor experience and knowledge, potentially affecting how outdoor adventure education courses may impact on their self-concept.

The timing of the waves of data collection may also have affected the findings of this study. The final wave of data collection occurred directly before the traditional holiday season school recess, which may have affected student self-concept. The stress of being engaged in school, increased workload (e.g., homework), studying for exams, and preparation of college applications by seniors make this a busy time of the academic year. Additionally, this final data collection occurred immediately after the outdoor component of these classes ended. Perhaps delaying the final data collection session would have allowed students to more fully integrate their experiences into their self-concept, and done so at a less busy time of the year.

Other aspects of outdoor activities such as weather, temperature, contact with other groups, and traffic to and from the location of the activity were not under control of the researcher. Additionally, the interpersonal relationships between the leaders and the students may have been different among groups. Although the factors mentioned above are also limitations for this research, the group leaders reported no untoward effects.

Recommendations

This researcher found both support and refutation of the findings of previous studies examining self-concept and outdoor adventure education with adolescents. Future research should identify and use covariates and other variables that may affect self-concept.

Outdoor adventure education courses with longer outdoor components have been shown to have more positive effects than short-term experiences (Hattie, et al., 1997). However, the findings of this study suggest there may be some benefits of multiple short-term courses. Factors such as length of time between short-term experiences, "timing" of the outdoor components in terms of their location in the greater academic schedule (e.g., Are the trips conducted during a busy time of the semester?), and the effects of the quantity of outdoor trips taken should be examined. The longitudinal effects of participation in these programs have received little attention.

Research should also be conducted using non-private school students. There may be latent factors affecting private high school students' self-concept that may be different from that of non-private school students. Studies should also examine programs offered by schools not located in large, urban environments.

This study did not examine the effects of the leadership team on changes in student self-concept. Future studies should include measurements of the leadership style(s) of the team members as well as the students' perceptions of their competencies and visions of them as outdoor leaders. Another aspect of leadership could be the students' expectations and perceptions of the leaders as role models compared to their actual experiences.

Another aspect of leadership may be the gender of the leaders. Having an all male or all female leadership team may affect change in self-concept, especially in same gender or in mixed gender groups. Additionally, the effects of continuous exposure to the leadership team both in and out of the traditional classroom over the course of the semester were not examined, and may be a factor. Perhaps exposure to new people in leadership roles would have a different effect on student self-concept.

Finally, although several researchers have investigated this topic, continual examination of change in self-concept as a result of participation in outdoor recreation activities should occur. The nature of the adolescent experience is ever changing. Increased exposure to electronic media, decreased levels of participation in physical activities, increased perceived level of daily stress, and the phenomenon of "growing up at a younger age" affect youth in contemporary society in much different ways than they did ten to fifteen years ago.

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IF THE DRESS FITS, WEAR IT: UNCOVERING MEANING IN GENDER STEREOTYPING IN AN AUSTRALIAN OUTDOOR EDUCATION PROGRAM

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INTRODUCTION

Over the past two decades in outdoor adventure education circles, a gradual swell of interest in bringing a gender lens to the examination of issues, theory and practice within the field has emerged. Mirroring the progress of feminist studies, early efforts in this area (Hardin, 1980; Henderson & Bialeschki, 1987; Mitten, 1985; Yerkes & Miranda, 1984) tended to concentrate on women's and girls' perceptions, and gender differences in behaviors, development, and needs. Such authors and researchers have been responsible for articulating the uneasiness felt by many feminist outdoor educators about gender equity issues within our programs. It is time, however, to move beyond a mode of thought that views men's experiences and women's experiences as essentially *different.*

Although feminist theory has been subjected to lively debate and undergone sophisticated shifts in the ways of conceptualizing and analyzing gender, much of the literature coming out of the outdoor field is still centered on women and difference. As Bell (1997) so clearly asked, "Has the dialogue on the nature of gender and associated social issues not changed in the past decade?" (p. 143). Henderson, Winn, and Roberts (1996) voiced similar concerns and asked for a more sophisticated analysis of gender. We need to focus on gender processes and the constructed meanings that create and reinforce difference, not merely view difference as "given" based on a biological dualism that finds little support when held to the test of credible research. Basing distinctions between individuals on taken-for-granted, binary sex categories creates a tendency to simply replace the sex categories with similarly defined gender categories and roles. This leads to a simplistic view of "sex" as the biological and physiological characteristics that allow one to classify individuals as male or female, and "gender" as the culturally constructed behavioral and psychological characteristics associated with being either male or female. However, within feminist literature, there has been a move away from conceptualizing gender as an individual attribute and toward an understanding of gender as process: that is, a conception of gender relations as an interplay between social practice and social structure (Connell, 1987). In this light, gender can be viewed as "the activity of managing situated conduct in light of normative conceptions of attitudes and activities appropriate for one's sex category" (West & Zimmerman, 2000, p. 132).

This study is part of a larger project that examined the significance of the gender system working within and through an outdoor adventure education program for adolescents. Although the categories female and male were used to describe the claimed and ascribed identities of the participants, the study was designed to explore the implications of the gender system with reference to agency and empowerment for adolescent girls, not to differentiate between "essential" female and male experiences. The data was not analyzed to make statistical inferences about girls and boys as homogeneous groups. It was viewed in terms of how different ranges of gender behavior among the participants influenced the working of the groups within the program, and how this influenced the experience for different individuals.

The intent of the present analysis is to focus on one aspect of significance found within the larger study: the nature and purpose of gender stereotyping. Three specific questions emerged in the context of this outdoor adventure education program:

1. What is the nature of stereotyping?
2. What does gender stereotyping accomplish?
3. How does gender stereotyping work?

In the context of this study, a stereotype is a "standardized mental picture that is held in common by members of a group and that represents an oversimplified opinion, prejudiced attitude, or uncritical judgment" (Merriam-Webster's Collegiate Dictionary Online, 2002). A gender stereotype, therefore, is such a mental picture about what it means to be female or male. The metaphor used throughout this paper relates gender stereotypes to the "dress" that we are seen to wear or are forced to wear. Sometimes we fit ourselves into this dress, even when it is tight and constricting. Sometimes, we cast this dress aside and replace it with a new one. Sometimes the outside world still sees us in our old dress and does not acknowledge the new attire. And sometimes we demonstrate all of the outward signs of a particular type of dress code, but no one pressures us to change into the appropriate dress, instead allowing us to masquerade in other costumes. Through greater understanding of how gender stereotypes (and dress codes) operate and what they accomplish, I hope to give some insight into the issue of gender equity in education and to contribute to an ongoing discussion in outdoor education that is grounded in gender theory.

The conceptual framework and the methodological approach was an interplay between the social construction of gender and Giddens' (1976, 1999) theory of structuration. Gender can be understood as a social construction, but without some clear avenue for agency within this construction, there is no way forward in attempting to change the gender system. Giddens' theory allows for the presence of agency amongst social actors. Although reproduced social practices (i.e., social systems) are recursive across time and space (and gender practices certainly are), and although the structures (i.e., rules of transformation and resources) that allow for this binding of time and space of social systems are resistant to change, resistant to change, the "knowledgeability" of human actors makes change possible.

METHODS

Setting and Participants

This study was conducted at a residential Australian outdoor education center. The center is maintained as part of the Queensland State Education System and is staffed by registered teachers. It is situated in a rural area of the state with easy access to waterways, national parks, state forests, and private land. It operates throughout the school year to address the educational needs of schools within the state of Queensland, mainly through individually designed five-day programs that emphasize personal and social development through an outdoor adventure experiential learning model. The schools that participated in this study chose a combination of residential and off-site experiences. Program elements included initiative tasks, high and low ropes courses, rock climbing, canoeing, and, depending on the age of the participants and the requirements of the school, a two to four day backpacking trip. Eight groups were recruited to participate in the study (one group from each of eight different schools, for a total of 138 participants). Participation by individual students was voluntary. Ages of the students ranged from 12-16 years. Five schools came from suburban areas and three schools came from rural cities or towns. Participants were predominantly Caucasian, with little ethnic diversity within the groups.

Initial contacts were made with schools two to four months ahead of their scheduled programs at the center. A site visit was then made to each school that agreed to be a part of the study. This visit included meeting with students to give a broad explanation of the study. It was presented as an investigation of group behavior and communication and how adolescent girls and boys worked and interacted in an outdoor education program. All data collection procedures were explained as well as the role of the researcher as a participant observer within the group. Time was also spent informally getting to know the students and answering questions.

Based on this meeting, students indicated on their school camp application forms their willingness or otherwise to participate in the study. The students eventually assigned to the study group (by the school organizer, not the researcher) signed assent forms and returned parental/guardian informed consent forms. Teachers assigned to the study group also signed informed consents. Each group was led by two teachers, one being a teacher from the school who was not an outdoor specialist, and one being a teacher from the Center who was highly skilled and experienced in leading and facilitating outdoor adventure activities.

Data Collection Methods

The multiplicity of meanings in social situations and the importance of being able to see participant behavior in context were factors that led to a naturalistic research design. The field research extended over a period of five months from July to November 1999. This field involvement included the following conditions: living on-site for five months at the outdoor education center and interacting on a daily basis with center staff and visiting-schools, recruitment trips to schools to make initial contacts with students, participating with each study group in the five-day program at the center, and follow-up visits to schools after they had completed the program at the center.

The research questions were broadly defined and not framed with predetermined hypotheses, and a feminist perspective was used as the focus of inquiry. This perspective "presumes the importance of gender in human relationships and societal processes and *orients* the study in that direction" (Patton, 1990, p. 86). A qualitative inquiry framework was used for the collection and analysis of data.

A multi-method approach to data collection was chosen to view the gender processes within the groups in some depth, to relate the observations made within the groups to the observations made about the philosophy and management of the outdoor education center, and to relate these observations to the life experiences of the participants and the climate and philosophy of the schools from which the students came. In qualitative research, the use of multiple data sources and methods (data triangulation) increases both reliability and internal validity (Merriam, 1988; Patton, 1990).

The methods used were as follows:

- direct observation – within the groups, and as a member of the center community (through participant observation).
- open-ended interviewing (through informal conversations, and a general interview guide approach – students and teachers were interviewed individually at the end of every program, and group interviews were conducted four to five weeks after students returned to their schools). The student interview guide is summarized in Table 1.
- document review (through student journals, and through school and center program documentation such as the schools' goals and objectives for the programs, and post-program evaluations of students and teachers).

Note taking and audiotapes were used to keep an accurate record of observations, conversations and interviews.

The challenge of qualitative analysis is to begin to interpret data as soon as observations commence, and to allow that data to direct the course of future data collection and observation. The student interview guide (Table 1), for example, was modified for each group and individual depending on the major issues that had emerged throughout the week, and on the way that the answers to questions directed the conversation. In one group, for example, there were twelve girls and five boys. Several of the girls were thought to be popular among both girls and boys, and were thought of as leaders within the school. All of the boys, however, were thought to be on the "fringe" in the school social climate. They were described by themselves and by several of the girls as "nerdy" or not "popular." Given these circumstances, many of the students

TABLE 1
Student Interview Guide

Tell me about your family. How many brothers and sisters do you have? Whom do you live with?
What people in this group did you know fairly well before this week? Tell me about them.
How has it been getting to know different people this week?
When have you felt supported by different people or by the group?
Were there any times you felt that individuals or the group didn't support you?
What has been your overall feeling about the week? Explain.
What has it been like to work with this group? How have we handled things?
What sort of roles did you see different people taking in the group?
Do you think our group would have worked the same if it had more girls/boys in it? Explain.
Did the girls and the boys approach tasks the same way? Explain.
How would you sum up the week?

were surprised to find that they liked each other and enjoyed working together. The perceptions about self, social relations, and new friendships then became an interesting topic to explore in one-on-one interviews. Similarly, the questions for the group interview back at school were formulated to focus on issues or incidents that occurred for that particular group during their week at the center, and to probe into concepts that had emerged from preliminary analysis of the data.

The complete data analysis process included the simultaneous techniques of discovery, coding and displaying data, and interpreting data in its context (as outlined by Taylor & Bogdan, 1984). All data were reduced to text and then further reduced through condensation. Themes relating to gendered interactions and meanings within the groups were then drawn out and developed. The text was reduced in two ways. After sections of field notes were reviewed, a summary sheet was made that included the main issues emerging from that chunk of data, how these issues related to gender, questions arising directly from the data, and concerns about data collection procedures (e.g., the transcripts were viewed to analyze the way that the researcher phrased questions). This information was used to guide the continuing work in the field. The second method of condensation that was used was to organize the text and filter out extraneous material. In one instance, for example, a recorded description of a group initiative task was transcribed to several pages of text. This was reduced to give a brief description of the activity and to highlight salient observations made by the researcher, as well as comments that were made by students and teachers. In the case of interviews, groups of questions that centered on a common theme were summarized. The participant's answers were then recorded as blocks of text rather than as individual fragments. Text that held no meaning was removed.

After reading and rereading the summaries and the reduced text, the words were further reduced by coding them with conceptual descriptors (i.e., open coding). This was done by using a constant comparison technique where slices of data were open codéd, then reread for clarification and adjustment of concepts, then reread again until a valid interpretation of the data were made (as outlined by Henderson & Bialeschki, 1995). This technique was continued across different slices of data, and the concepts further refined. Different data sets, such as the individual groups, center teachers and school teachers, researcher observations, participant interviews, and student journals were also compared. Using the same technique as described above, an axial coding system was developed that grouped concepts into higher order categories and developed connections between categories (as described by Pandit, 1996). An example of the documenting of concepts and categories is shown in Table 2.

TABLE 2
Gender Stereotyping:
Concepts and Categories Linkage

Concepts	**Categories**
Handling Tools Task Accomplishment Planning/Doing Problem Solving Maintaining Relationships Strength Resistance Competition Voice	Gender Roles ↓ Refined to: Gendered Roles
Gendered Roles: • boy/girl strengths • planning versus doing • bitchiness • leadership styles • bossiness • clown/joker • competition • aggression • maintaining relationships Resistance Sexism	Gender stereotyping
Gendered Help • avoiding physical help • asking for physical help • offering physical help • accepting physical help Gendered Rewards Gendered Sanctions Resistance Voice/Silencing	Sexism • benevolent • hostile
Gender Stereotyping Sexism: • benevolent • hostile Resistance Voice/Silencing	Power and Control

Reliability (or consistency) was addressed through triangulation of multiple methods, through thorough documentation and through check-coding. When the first set of field notes were transcribed, initial coding ideas were discussed with an administrative member of the center staff. This person was familiar with the working of the center and could offer valuable insights as the concepts were developed. With refining of the codes, an inter-rater reliability of 90% was reached. In the initial stages, each coder also recoded their own work three to five days apart to ensure that there was a high degree of internal consistency.

RESULTS

Gender stereotypes emerged as a recurring theme in terms of both stated views and the behaviors of the participants. This focused the analysis on trying to understand three main issues with respect to gender stereotyping in the context of this outdoor adventure education program:

1. What was the nature of gender stereotyping?
2. What did gender stereotyping accomplish?
3. How did gender stereotyping work?

The Nature of Stereotyping

Many students, both girls and boys, stated in general conversations that they did not believe that girls and boys were very different in their abilities. Here is an example of this stated by a 16-year-old girl when asked if girls and boys work at things the same way:

> I think everyone pretty much has the same ideas about things, because we are all working at the same level ... in all the groups that were working. And we all have to work together. We all think the same.

However, within this same conversation, she tended to highlight differences rather than similarities between girls and boys.

> Question: Do you think that if we had more boys in the group, our group would be the same or different?
> Answer: Definitely different. With things like the hike the other day, the guys tend to be a lot stronger than the girls, and they can go a lot further. And if there were less girls, it would be less people wanting to rest, and I think the boys would be making it harder.

The belief that boys are stronger than girls was a recurring theme throughout all of the groups, with this idea being stated many times by both girls and boys. When using the word "strong", there was usually an assumption that strength would automatically be associated with physical strength.

> I am more of a stronger person so I help people along. Because we need more muscle. Like we did an activity today where we had to lift people through and we needed strength for people lifting people through (comment from a 15-year-old boy).

> Because with things like the hike the other day the guys tend to be a lot stronger than the girls and they can go a lot further (16-year-old girl).

Such ideas were voiced even though the notion of different strengths within the group was discussed on many occasions during group processing sessions facilitated by the teachers, and during interviews.

The belief that boys are stronger than girls played itself out on many occasions within the groups. For example, on a difficult hike that required the crossing and re-crossing of a fast flowing river, boys did most of the passing of backpacks. The center teacher (i.e., the experienced outdoor instructor) tried to intervene and placed girls in positions where it would be logical for them to help. For the most part, however, the boys continued to step forward to lift and pass packs, and the girls continued either to ask them to do so or to acquiesce to the routine. The teacher from that school reinforced the behavior. He encouraged the boys to do the lifting and extra carrying and encouraged the girls to give their packs to the boys. In conversations with the researcher, he stated his belief that boys are naturally stronger than girls are, and that it was a matter of efficiency to have the boys do more of the physical tasks. This was an example of how leadership and school climate influenced the beliefs and actions of group members.

Another commonly held belief was that boys are practical and just "do" things, whereas girls plan and think ahead.

> I think that the girls like to contemplate their next move a lot more than the guys. The guys seem more spontaneous in the actions they take. They want to "do" things, but if it doesn't work out they are changing as they go along. The girls are thinking ahead (comment from 15-year-old boy).

> It is the usual boy thing, a lot of it. We will just go out and do it where the girls would consider more the emotional part of things (comment from school teacher).

> The boys always jump in and do it and the girls always sit back and think, "What if we do this, and that, and that?" The boys are, I found in myself, I see something and OK, let's go and do it. The girls were like I don't know. A couple of the rivers, I know like I could jump it and some of the girls couldn't even make it half way. Then you have to go back and help the girls across (comment from 16-year-old-boy).

This "doing versus thinking" stereotype also manifested itself in some of the actions and behaviors within other groups. An example of this was with a group of 16-year-old students who were on a strenuous four-day backpacking trip. A number of boys were constantly taking the lead and pressing the pace. The center teacher tried to circumvent this by changing the leaders on a regular basis and encouraging girls to take a turn at leading. The trail was not well defined and it was easy to go off trail. When the girls were in the lead they tended to stop whenever there was some uncertainty about the trail, consult the map, and scout out the way ahead. At those times, the boys who liked to be in the front would go past the girl or girls in front, and just lead the group off in what they thought was the "approximate" direction. On several occasions, the group ended up walking over more difficult terrain, but the strategy of the boys of "just doing it" was never questioned. Neither was it questioned that the girls who were trying to think ahead lost the leadership position during the process. Students recognized that there were many different ways of being a leader, but when they discussed the day's events they would usually describe the people who were at the head of the line during the hike as the "leaders" of the day.

One group did not demonstrate this pattern at all. This was a group of 12-year-olds who were happy to share the leadership on the trail between girls and boys, and both girls and boys usually planned and thought ahead rather than rushing into route choices. This, according to the school teacher, was how they were encouraged to work in their classroom at school. It was an indication that the differentiation of roles based on gender that was observed in the other groups was a learned behavior.

Other commonly held beliefs were that boys are clowns and that girls are bossier than boys are.

> The boys are more funny, I guess. They clown around more. The girls are more straight, bossy type people (comment from 15-year-old boy).

The girls were also seen to be less competitive than boys, and better than boys at relating to people.

> Guys are more competitive. They like to compete with the other guys. The boys don't care about competing with the girls (comment from 14-year-old girl).

> The guys are more argumentative than the girls. It's territory and stuff (comment from 16-year-old boy).

> She is really caring and she just took care of everyone, even if it was like a little thing. She would like clean and be the Mom of the group (comment from 16-year-old boy).

Girls were also often described as being "bitchy". Bitchiness is defined here as "characterized by malicious, spiteful or arrogant behavior" (Merriam-Webster's Collegiate Dictionary OnLine, 2002). It is most often used to describe the behavior of women and girls, rather than men and boys.

> Girls can be really snide and bitchy to each other (comment from 12-year-old girl).

> I was really surprised that the girls all got on so well together this week. Like, when girls are together they are usually bitchy towards each other (comment from 15-year-old girl).

This type of comment was repeated by at least one girl in every group and by some boys throughout the groups.

In summary, the following recurring gender stereotypes were described and acted upon: boys are physically stronger than girls; boys are practical and do things whereas girls plan and think ahead; boys are clowns; girls are bitchy; girls are bossier than boys; boys are more competitive than girls; and girls have better relationship skills than boys. All girls did not act in the same way, just as not all boys acted in the same way. The group interactions, however, were strongly influenced by the pervasiveness of gender-stereotyped beliefs.

What Gender Stereotyping Accomplished

The result of differentiating between gender roles had both positive and negative effects. Using stereotypes to describe gender roles helped to reinforce gender identity, something that was strongly felt and voiced by both girls and boys. This claiming of gender identity tended to provide safety and stability for individuals. Even those participants, both girls and boys, who did not play their roles according to the stereotyped scripts, strongly identified with their ascribed gender identities. However, stereotyping also placed limits on perceived abilities.

> Question: Do you think the girls could have done this trip by themselves?
> Answer: I am not too sure about that. I was just talking about that with Julie because we didn't think it would be very good because the guys, they have more strength than the girls generally. So if there is anything that has to be done and you have to climb a cliff and pass packs, if there were no guys, we would have a bit of trouble (comment from 16-year-old girl).

A group from another school, however, had chosen to have an all girls group for their backpacking trip. The general perception within that group was that they had achieved much more than they thought they were capable of, and they had achieved it without the help of boys.

> Question: So do you think we've accomplished more or less being all girls?
> Answer: More. We've done a lot of things we didn't think we could do, like climbing the mountain. Two mountains. And then having the injuries and all that, and I think we've accomplished a lot (comment from 15-year-old girl).

Gender stereotyping also accorded different statuses based on perceived (and acted) roles. Physical strength was accorded great status within the groups, and that was a role that was predominantly claimed by and accorded to boys. There were many instances of girls displaying physical strength and offering to lend physical assistance. Rarely, however, did a boy accept such help, especially if it could be construed that he was not strong enough to accomplish the task himself. In the case of girls who helped other girls in a physical manner, there was a real sense of selected vision. Their efforts were often not seen and not acknowledged, by either girls or boys. In one group discussion around the campfire at night, the students started to talk about the efforts that everyone had put in that day. One girl had sprained her ankle, so the group had to go slower. Several students took some of her gear so that her pack would be lighter. One of the people who had taken a lot of the gear was a girl who was physically capable, always kept up with whatever pace the group set, and acted as a quiet organizer within the group. She kept people on task without drawing attention to herself. During the discussion, several boys were mentioned and thanked for the way they had helped the group get through the day. Anne's efforts, however, were completely overlooked until mentioned by the center teacher. The "dress" of strength was not the outfit that was granted to girls – at least not until it was pointed out and legitimated by the center teacher. For a girl of this type, although the dress did fit, the group did not recognize that it was hers or that she was wearing it.

The strength element that was most often associated with girls was in terms of being a strong organizer, although sometimes this idea was followed with a negative connotation. As stated by one of the boys when distinguishing girls' roles within the group: "Actually the stronger people, they are more bossy. People like Kay, and people like that." "Girl" strength was also not seen as being as valuable to the group as "boy" strength was. This type of gender stereotyping reinforced a hierarchical gender system that accorded greater status to boys.

> Question: So you would say that the boys had a more physical role in the group?
> Answer: Definitely more physical. They were stronger and had more muscles (16-year-old boy).
> Question: Do you think the girls could do it without you?
> Answer: They probably could, but I would like to see it. Some girls stood up, like Amy and a couple of other people.
> Question: Did you see any of the girls at the front for a long period of time?

> Answer: Karen and Wendy stayed up front for a while the second and third day because they wanted to be up front, but Ryan and them usually went past them and went faster.
> Question: Do you think the guys felt more comfortable in front, in general?
> Answer: Yeah. I think they've just got that little bit extra control of everyone.
> Question: They've got it, or they like to have it?
> Answer: They've got it and they still like to have it.
> Question: Is it something they're used to having?
> Answer: Yeah. Especially like with Ryan. He likes to get everything done with real quick. That is why he was always up front.
> Question: How do you think that a girl who would like to have control, how is she going to get it?
> Answer: She is going to have to force her way up there because, like, Ryan and them are not going to give way too easy. They just have to force their way up there and stay up there.

There were girls in all of the groups who did "force" their way to the front in a number of physical tasks. Those girls, however, although demonstrating physical capabilities, were usually recognized more within the group for their organizational abilities. Once again, individuals were forced to wear (at least in terms of what people saw them wearing) a dress that did not fit. In most of the hikes, the girls who did stay at the front were those who did it quietly while allowing the boys such as Ryan to be in the first position in the line. The center teacher, in such situations, usually changed the leaders and navigators so that both girls and boys had a chance to lead. The Ryans of the group, however, would constantly chide against this and get back to the front.

> Question to 15-year-old girl: Did you get to take a spot at the front at all?
> Answer: Yes.
> Question: How did that feel?
> Answer: It is a lot better than being at the back. Being at the back makes you feel a bit slow and not very good about yourself, but being up front, you keep up with the pace a bit better and you feel like you are going somewhere.
> Question: How did it feel when you led the group?
> Answer: It was a bit annoying at times, if you walk in the wrong direction.
> Question: Did you feel in control?
> Answer: Yeah.
> Question: Was it a good feeling to have that control and make decisions?
> Answer: Yeah.
> Question: Do you often get to do that in a physical situation?
> Answer: No.
> Question: Who do you think gets more control? What sort of person?
> Answer: A person who talked a lot and is very loud.
> Question: How can you get more practice at having the job if you are not very loud?
> Answer: Trying constantly to speak.
> Question: When you were leading did you feel that someone was behind you and ready to get on you?
> Answer: Yeah. It does feel like that. I think a lot of people like to take the front spot and get to lead the group.
> Question: Who would you say were the people who most wanted to get past you?
> Answer: The guys.
> Question: They liked being up front?
> Answer: They thought that the girls shouldn't take the front and that the guys should.

To summarize, gender stereotyping provided structure and order that gave a sense of safety and familiarity to many of the participants. It also regulated behavior, placed limits on perceived abilities of many students, and accorded different situational statuses to girls and boys. In this structure, it was predominantly boys who were accorded the highest status, based on their perceived greater physical strength, as well as on the way that they claimed

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leadership and power. It was more difficult for girls' voices to be heard within this structure. Although some girls and boys resisted their stereotyped roles and transgressed the boundaries of "appropriate" action, the pervasive gender stereotyping within groups often led to silencing or distorted vision about what "dresses" some of the girls and boys were wearing.

How Gender Stereotyping Worked

In terms of how gender stereotyping worked, the main issues were power and control. A pattern emerged that Glick and Fiske (1996) would label as the operation of hostile and benevolent sexism. In the context of this study, sexism can be viewed as "behavior, conditions, or attitudes that foster stereotypes of social roles based on sex" (Merriam-Webster's Collegiate Dictionary OnLine, 2002). Benevolent sexism was the more usual form of controlling gender roles. The physical offers of help given by the boys to the girls (and willingly accepted by the girls) were usually given with "love". The result, however, was a reinforcement of the girls' subordinate role within the group, based on the weight given to the importance of "boy" strength.

> Question to 16-year-old boy: What did you see as your role in the group?
> Answer: To help out Kathy and helping carry packs and stuff. When things were getting heavy, take stuff out and put it in my pack.
> Question: What did you see as the girls' roles in the group?
> Answer: I don't know.

Many other boys and girls could articulate important roles for girls, as individuals and as a collective (although physical strength was rarely mentioned). However, this inability to articulate the girls' roles was a common response from boys of all ages. Some boys were sure of their own roles in the group, but weren't sure what the girls did. When this boy was later asked with whom he would like to work if he did the trip again, he at first mentioned only boys. When asked if he'd like to go with any of the girls and why, he said, "Oh yeah. So they could cook." The interesting thing about this statement is the fact that the girls did not do all of the cooking and cleaning. Many boys were both willing and able to do these tasks, and enjoyed doing them. Once again, there was selected vision regarding gendered roles.

Although there were no instances of overtly hostile behavior, on some occasions, girls and boys who stepped too far out of their prescribed roles were brought strongly back into line by the more powerful boys in the group. The methods employed were using sarcasm and bitchiness. These methods were more often applied to girls, as most of the boys seemed to be aware of the position they held in the power hierarchy and knew how to stay within the confines of their roles. As stated previously, bitchiness is "characterized by malicious, spiteful or arrogant behavior" (Merriam-Webster's Collegiate Dictionary OnLine, 2002) and is associated with girls rather than boys. Bitchy behavior, although often ascribed to girls, (this was a general "girl" behavior that participants were surprised not to see in the group), was never attributed to boys. The behaviors that some boys demonstrated, however, fitted the definition of bitchy. On one occasion, for example, a 16-year-old girl had taken one of the most powerful boys to task for not doing his share of work within the group. He was also very quick witted, and one of the "jokers" in the group. When Raechel confronted him, his response was to make a joke of her tantrum and then to continue to refer to Raechel's "narni" (Australian vernacular for throwing a tantrum) on any occasion that Raechel tried to assert herself within the group. The outward response of the group was to laugh at Alan's comments and jokes (although his comments were never recognized as being bitchy). However, in final interviews with group members, some students revealed that they thought that Raechel had been justified in her comments to Alan. They never confronted Alan about his behavior, though, and they never associated his behavior with bitchiness. Bitchiness was a term that was correctly defined by many students, but only associated with girls. Alan was never taken to task and was never seen to be wearing that "dress". In the mind of one student, things had resolved themselves by the end of the week.

> Question: Any other thoughts for the week?
> Answer: There were a couple of conflicts through the week. There was the work, but that resolved itself. Raechel's narnie. What she did. We got that worked out.
> Question: Do you think she was justified?
> Answer: She was right, because Alan got on my nerves for a little while and I had to just slack off.
> Question: So do you think it was getting to Raechel a little bit when Alan kept on her and everyone was laughing with him?
> Answer: Yeah. But she was right. They hardly did anything (referring to Alan and another boy in that cooking group), and someone had to stand up to him. And she did.
> Question: Is that why Alan kept on her for the rest of the week?
> Answer: Alan knew she was right and he doesn't want to say that. He doesn't like having people above him.
> Question: So you think we managed to work that one out?
> Answer: We got that one taken care of.

The result for Raechel of having "taken care of that one" was that she was effectively silenced for the rest of the week.

Summary

How gender stereotyping worked and what it accomplished were closely related. Stereotyping worked through the assertion of power and control. This can be seen in how Alan focused the attention of his altercation with Raechel on her female tantrums. Stereotyping also bestowed or limited power and control, as demonstrated by Alan's silencing of Raechel and his silencing of the rest of the group.

Different types and levels of power were observed. The most obvious form was seen in who set the "tone" of the group. In most cases, a boy or group of boys who were loud, strong and popular set the tone. Alan regularly set the tone in his group, but he was not the only person who had power. Some boys asserted their power through physical strength and by taking the lead on the trail. Some girls asserted their power through group maintenance tasks. Some girls and boys demonstrated their empowerment through resistance of gender-stereotyped roles. Anne, for example, functioned well in both physical strength and relationship realms. Although her physical strength was sometimes overlooked, it was still there to be seen by the more observant participants. It was an act of resistance against the unwritten rules of gender behavior.

CONCLUSIONS

This study addressed the nature and purpose of gender stereotyping in an outdoor education program for adolescents. Gender was conceptualized as a process rather than as an individual attribute. Although participants identified themselves categorically, and although categorical gender descriptors were used when presenting findings, the study does not attempt to portray essential differences between girls and boys. There was a wide range of behavior demonstrated by both girls and boys. Some girls, for example, took on stereotypically male roles, and vice versa. However, the entrenched belief in gender stereotypes, and the enactment and enforcement of them by many individuals, shaped the extent to which resistance and gender transgression were possible. These things also shaped the power structures within the groups. There was a predominantly male power structure legitimized largely through the stereotypical portrayal of boys as physically stronger than girls and more capable than girls of taking "action" in physical situations.

The trends reported here are important in both a theoretical and practical sense. The fact that behaviors were not consistent across sex, and that girls and boys sometimes experimented with different roles and challenged the observed stereotypical behaviors, lends support to the concept of gender as a social construct that is produced and reproduced through the actions of individuals and social groups. Connell (1987) conceptualized a gendering process that is grounded in an historical context. "Change is produced by human agency; conversely all practice occurs in specific settings and has a particular place in the sequence of events. There is a long-term historical dynamic of practice and structural transformation" (p. 149). Practice can be viewed in two ways. In the first, individuals are agents whose practice (or actions) can transform social systems. In the second sense, these agents, through their relationships within the system, are also taught the accepted practices that maintain the system. Gender practice, such as gender stereotyping, can be viewed in this manner. There is a long history of gendered relationships based on an unequal power hierarchy between men and women. Practicing stereotyped gender roles supports the gender system, but the practice of transgressive gender roles can transform that system.

Understanding these theoretical implications can help practitioners to implement outdoor programs that support and encourage girls (and boys) to experiment with and transgress gender roles. Many outdoor programs claim to foster individual empowerment. The strong link in this study between gender stereotyping, power, empowerment, and silencing suggests gender issues may be extremely important to the formulation and presentation of programs that are empowering to all participants. Confronting gender practices in outdoor programs may not be an easy task. Some social structures (rules and resources) are more deeply entrenched and institutionalized than others:

> Those types of rule which are of most significance for social theory are locked into the reproduction of institutionalized practices, that is, practices most deeply sedimented in time-space. By rules that are intensive in nature, I mean formulae that are constantly invoked in the course of day to day activities, that enter into the structuring of much of the texture of everyday life. (Giddens, 1999, p. 125)

Gender structures could be seen to fall squarely within this category. Because they are such an intrinsic part of our social practices, they are likely to slip under our radar and permeate themselves throughout our programs, with little attention paid to them. Studies such as this one that provide an in depth look at the processes occurring within outdoor programs are important to our future practice.

The results presented here are patterns and trends observed in one particular place at one point in time. It should not be construed that *all* girls or *all* boys felt and acted in a particular way. Neither should it be generalized to all groups involved in outdoor adventure education.

What can be suggested, however, is that these patterns can be viewed as part of a gender system operating within these groups and this program, and that these patterns give the gender system continuity both within and through the program and within the general society in which these participants live. There are structures (rules) that act to keep the system functioning in a way that may accord different levels of power to individuals, based on gender. Within this system, however, the rules can be negotiated and transgressed, as well as enforced.

It is not through an intuitive sense that our programs don't work for girls, or through attempts to restructure our programs based on girls being different from boys that we will achieve gender equity within outdoor education, and within education in general. It is through more focused attempts to question what the gender order looks like in different aspects of our world, how it works, how it is maintained, and why it works in the way that it does that this goal will be reached. With more research focusing on understanding gender relations in the outdoors, we may even learn, as hooks (1994) admonishes us, to "teach to transgress" We may be able to empower our participants, whether they are girls or boys, to wear that dress if it fits, or if it feels comfortable and empowering. And they may also feel empowered to rip it off when they recognize it as constricting.

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DIFFICULTY AND ABILITY: STAFF MEMBER PERCEPTIONS OF SEASONAL STAFF TRAINING

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BACKGROUND

The process that camp directors use to plan and implement their staff training and continuing education may be affected by understanding seasonal staff-member perceptions of the difficulty and ability of camp-specific skills and knowledge. The purpose of this study was to investigate staff perceptions to provide a baseline of information for practice and future research.

Camp directors spend time during the staff recruiting process informing potential staff about the rigors of the job, and at the same time balance this information by encouraging them to apply for camp positions that match their ability levels. Once the staff members arrive, a pre-camp orientation is provided to both increase skill and community development, and instill confidence in staff members' ability to effectively complete their job responsibilities. Staff members begin working and modify their actions based on feedback received from campers and staff throughout the employment period. Little is known about whether or not staff perceptions of the difficulty of the job or their own ability change during critical points during the summer. These perceptions may provide insight about the knowledge and skill levels of staff, and thus directly impact the experience for the campers in their care.

Motivation to learn has been studied in many contexts. Two major groups of theories specific to workplace learning are "content" and "process" (Steers, Porter, & Bigley, 1996). Content theories assume that personal factors direct individual behavior. The focus is on internal factors and how an individual prioritizes these factors. The major content theories are: Maslow's hierarchy of needs, Alderfer's existence-relatedness-growth, Herzberg's motivator-hygiene, and McClelland's learned needs. Process theories focus on the psychological processes underlying how behavior is directed. The major process theories are Vroom's expectancy theory (1964) and the Porter-Lawler model (1968). The process models include some aspect of a decision-making process as part of human behavior as a component of the models.

Vroom (1964), basing his work on the theoretical frameworks of Lewin (1938) and Tolman (1959), brought together the interactive nature of characteristics of the individual and the individual's perceptions of the environment. The theory can be explained most simply by the following equation: motivation equals valance as a function of expectancy. Valence is defined by Vroom as "affective orientations toward particular outcomes. An outcome has a valence of zero when the person is indifferent to attaining or not attaining it" (1964, p.15). Expectancy is defined as "a momentary belief concerning the likelihood that a particular act will be followed by a particular outcome" (Vroom, 1964, p. 17). Due to the recognized complexity of the decision-making process, the operator between valence and expectancy was referred to as force, but was not specified as additive or multiplicative by Vroom.

Porter and Lawler (1968) contended that motivation is more complicated than Vroom outlined. They extended Vroom's model to include the individual's ability (or lack of), the perceived equity of rewards, the perception of the nature of the task, and self-ratings of performance. Both models are supported by research for

TABLE 1
Camp-specific Skills and Knowledge that Served as the Content Items of the Questionnaire

I know how to adapt my program activity to different age groups.

I can teach my program activity in a way that accomplishes this camp's goals & philosophy

I can hold my campers' attention for the whole program activity period.

I can correct campers who are doing the program activity incorrectly in a positive way (without embarrassing them).

I can apply conflict resolution strategies to help solve problems between campers.

I can creatively occupy my group during 15-30 minute breaks in the schedule.

I can lead a group with a balance of discipline and fun.

I can get my group to places on time.

I can re-direct a situation in a positive way when something is going wrong.

I can improvise when things are not going the way I expected.

I know when I need to ask for help.

I understand the role of "being the parent" while caring for campers.

I am aware of appropriate staff behavior in order to prevent child abuse at camp.

I can help a camper overcome homesickness.

I can tell when a camper is being pushed beyond his/her limits.

I can ask open-ended questions to increase the flow of communication with campers.

I understand the "chain of command" of the camp (who is responsible for what).

I can clearly explain the details of my specific job functions at this camp.

I know how to complete the day-to-day paperwork required for my job.

I know this camp's personnel policies (do's and don'ts).

I have a complete sense of the philosophy and values of this camp.

I know where all of the camp buildings are located and could find them again.

I know all the areas that could be dangerous for campers on the camp property.

I know what to do at this camp in the event of an emergency.

Note: While these items were determined in a systematic fashion to be a specific set of camp knowledge and skills, they are not to be construed as definitive or exhaustive.

some components, but due to the complexity of the process, neither overall model has met with clear empirical support (Roberts & Glick, 1981). Both models do, however, provide a useful basis for managers to analyze and understand motivation within organizational settings. Specific to this study, these process theories were used to operationalize the measurement of perceptions regarding the learning of camp-specific job skills and knowledge.

METHOD

This article explores the univariate results of two variables (perceived difficulty and ability of camp-specific skills and knowledge) used in a broader multivariate analysis investigating informal learning and socialization among new and returning staff (Powell, 2001). As a basis for understanding the univariate results, the methods of the broader analysis will be briefly reviewed. A list of 24 camp-specific skills and knowledge statements was created based upon the triangulation of open-ended responses from a pre-study, interviews with camp directors, and review by an expert panel (see Table 1). The Summer Camp Training Inventory (SCTI) was comprised of each statement and was followed by a set of questions that were derived from the workplace organizational literature related to motivation: 1) How important is this (referring to the content item) to this camp? 2) How important is this (content item) to me? 3) How difficult do you feel this is to master? 4) How well do you know (or can you do) this? These questions were followed by a ten-point Likert-type scale as suggested by Alwin (1992), anchored by "not at all" (0) to "extremely" (9).

Face and content validity were investigated through the review of content items by a panel, as well as through cognitive interviews (Presser and Blair, 1994) during the pre-test. Exploratory factor analysis and reliability analysis results supported the constructs with all Cronbach's Alphas above .70 (Cortina, 1993; Zeller and Carmines, 1980). The ecological validity (Mook, 1983) is attributed to the fact that data were collected at the camps in the midst of summer camp season.

Parallel forms of the survey instrument were used. In order to control for framing effect and to increase cognitive availability (Clark and Schober, 1992) the conceptual categories were kept intact on both forms of the instrument. During the pre-test, non-relevant questions were used to determine whether or not staff members would admit they did not think an item was important and that they did not know how to do the item. The responses were taken at three points in time: first and last days of training and after one-month-on-the-job. Data collected at these three points were analyzed using a doubly-multivariate repeated measures MANOVA investigating time (data collection points) and status (returning versus new staff). Four composite-variables were created for each participant at each data collection point by summing the individual scores for the content items, producing overall scores for importance to camp, personal importance, difficulty, and ability. A subset of the data was used for this analysis due to the three-measure-over-time design—only those staff members (n=211) who completed the questionnaire all three times were included in this analysis. Analysis (a series of ANOVAs using demographic, camp , number of times completing the questionnaire, etc.) indicated that this sample subset was not different from the complete sample (n=702) in any apparent way. The study population consisted of staff that worked at accredited camps in the Southeastern section of the American Camping Association. The camps (8) were selected based on a purposeful sample to include different types of camp operations (agency, independent, co-ed, girls-only, and boys-only).

RESULTS

The four composite variables were used in an overall doubly-multivariate profile analysis, testing for differences based upon status (new versus returning staff) over time (three data collection points). In the Wilks' Lambda multivariate test, the between-subject variable "status" was significant, and the within-subjects variables "time" and the time-by-status interaction were also significant ($p<.001$). Given the overall significance, the four measures (importance to camp, importance to me, difficulty, and ability) were investigated with step-down univariate analysis. The results of the step-down analysis for difficulty and ability will be reviewed in this paper. Univariate tests for "difficulty" and "ability" showed significant differences ($p<.05$, $p<.001$ respectively) for the time-by-status interaction.

Difficulty

In terms of "difficulty," returning staff reported consistent perceptions, new staff reported increases at each of the three measurement points, and converged with returning staff after one-month-on-the-job (see Table 2). Investigation of the content-item means indicated significant differences in five of the 24 items: 1) "I know where all of the camp buildings are located and could find them again"; 2) "I know all the areas that could be dangerous for campers on the camp property"; 3) "I can re-direct a situation in a positive way when something is going wrong"; 4) "I know how to complete the day-to-day paperwork required for my job"; and 5) "I can help a camper overcome homesickness."

Investigation of the means (see Table 3) indicates that new staff reported an increase in perceptions of dangerous places in camp from the first to the last days of training, while returning staff reported a decrease. In dealing with homesick children, both new and returning staff re-

TABLE 2
Composite Variable "Difficulty"
Mean and Standard Error Time-by-status

Status	Time	M	SD
New	1	88.44	3.00
	2	93.16	3.94
	3	102.11	3.74
Returning	1	104.93	3.56
	2	105.23	4.69
	3	104.71	4.44

TABLE 3
Mean and Standard Deviations of Significant Individual Items: "Difficulty" Time-by-status

Item	Status	Time 1		Time 2		Time 3	
		M	SD	M	SD	M	SD
Buildings	New	3.09	1.84	2.76	2.25	2.87	2.61
	Return	2.15	2.34	2.35	2.63	2.19	2.70
	Total	2.68	2.12	2.59	2.42	2.58	2.66
Danger	New	3.23	2.19	3.89	2.10	3.84	2.56
	Return	3.98	2.25	3.75	2.51	3.60	2.45
	Total	3.55	2.24	3.83	2.28	3.74	2.51
Redirect	New	4.66	2.55	4.51	2.41	8.02	1.55
	Return	5.35	2.11	5.23	2.36	8.09	1.12
	Total	4.96	2.39	4.82	2.41	8.05	1.38
Paperwork	New	2.69	1.88	3.10	2.03	3.58	2.18
	Return	3.47	2.04	3.91	1.90	3.72	2.30
	Total	3.02	1.98	3.45	2.01	3.64	2.23
Homesick	New	4.11	2.87	4.33	2.91	8.30	1.23
	Return	5.49	2.37	5.51	2.35	8.07	1.65
	Total	4.70	2.74	4.83	2.74	8.20	1.42

Note: See Table 1 for complete listing of the item wording.

TABLE 4
Composite Variable "Ability"
Mean and Standard Error Time-by-status

Status	Time	M	SD
New	1	105.71	3.57
	2	137.24	3.79
	3	169.63	2.51
Returning	1	165.08	4.25
	2	175.65	4.51
	3	175.47	2.99

TABLE 5

Mean and Standard Deviations of Significant Individual Items: Ability Time-by-status

		Time 1		Time 2		Time 3	
Item	Status	M	SD	M	SD	M	SD
Buildings	New	5.23	2.98	7.23	2.32	8.14	1.58
	Return	8.23	1.44	8.49	1.35	8.40	1.65
	Total	6.52	2.86	7.77	2.06	8.26	1.61
Philosophy	New	5.40	2.52	6.77	2.14	7.77	1.57
	Return	7.37	1.88	7.74	1.76	8.19	1.17
	Total	6.24	2.47	7.18	2.04	7.95	1.42
Danger	New	4.66	2.55	4.51	2.41	8.02	1.55
	Return	5.35	2.11	5.23	2.36	8.09	1.12
	Total	4.96	2.39	4.82	2.41	8.05	1.38
Emergency	New	3.35	3.43	6.41	2.89	7.24	2.24
	Return	7.48	2.03	7.87	1.87	7.80	1.92
	Total	5.12	3.56	7.03	2.60	7.48	2.12
Improvise	New	4.70	3.15	5.84	3.02	6.89	1.95
	Return	6.92	1.66	7.12	1.85	7.22	1.40
	Total	5.65	2.83	6.39	2.65	7.03	1.74
Redirect	New	4.86	3.20	5.71	3.10	8.02	1.55
	Return	6.80	1.74	7.07	1.96	8.09	1.12
	Total	5.69	2.83	6.29	2.75	8.05	1.38
Help	New	6.04	2.92	6.70	2.72	7.23	1.80
	Return	6.97	1.99	7.19	2.05	6.91	2.24
	Total	6.44	2.60	6.91	2.46	7.09	2.00
Parent	New	4.10	3.75	5.53	3.34	7.14	1.76
	Return	7.05	1.49	7.46	1.44	6.98	2.15
	Total	5.36	3.33	6.35	2.85	7.08	1.93
Resolution	New	3.76	3.42	4.81	3.38	6.88	2.04
	Return	6.69	1.81	7.00	2.08	6.67	1.99
	Total	5.01	3.19	5.75	3.08	6.79	2.01
On-time	New	4.85	3.43	5.34	3.69	7.97	1.46
	Return	7.22	1.67	7.29	2.35	7.66	1.84
	Total	5.86	3.04	6.17	3.32	7.84	1.64
Break	New	3.53	3.45	4.86	3.62	6.89	1.70
	Return	6.65	1.98	6.77	2.11	7.12	1.61
	Total	4.86	3.29	5.67	3.20	6.98	1.66
Balance	New	4.47	3.31	5.02	3.51	7.03	1.88
	Return	6.93	1.71	7.25	1.70	7.34	1.30
	Total	5.52	3.00	5.98	3.08	7.16	1.66
Adapt	New	3.80	3.44	4.66	3.61	6.86	2.06
	Return	6.23	2.65	6.73	2.02	6.96	1.74
	Total	4.84	3.34	5.55	3.19	6.90	1.92
Attention	New	3.44	3.25	4.14	3.55	7.81	1.61
	Return	6.30	1.97	6.57	2.36	7.56	1.76
	Total	4.66	3.11	5.18	3.31	7.70	1.67

Teach	New	3.69	3.40	4.55	3.53	6.97	1.93
	Return	6.40	2.33	7.24	1.64	7.36	1.38
	Total	4.85	3.27	5.70	3.17	7.14	1.72
Correct	New	4.35	3.61	5.23	3.69	6.88	2.12
	Return	6.83	2.18	7.27	1.77	7.18	1.96
	Total	5.41	3.31	6.10	3.18	7.01	2.05
Paperwork	New	3.20	2.96	5.23	2.82	6.77	2.08
	Return	5.33	2.63	6.95	1.58	7.19	1.93
	Total	4.11	3.01	5.96	2.51	6.95	2.02
Policy	New	5.11	2.92	7.01	1.85	7.43	1.99
	Return	7.26	2.04	8.00	1.20	7.64	1.97
	Total	6.03	2.79	7.43	1.67	7.52	1.97
Chain	New	4.97	2.98	7.47	1.89	7.62	1.72
	Return	7.49	2.26	8.06	1.26	7.71	1.67
	Total	6.05	2.97	7.72	1.67	7.66	1.69
Job Details	New	5.13	2.56	6.78	2.41	7.47	1.73
	Return	6.49	2.70	7.58	1.41	7.84	1.42
	Total	5.71	2.70	7.12	2.07	7.63	1.61
Staff Behavior	New	5.76	3.31	7.35	2.58	7.81	2.18
	Return	7.95	1.80	8.17	1.85	8.24	1.48
	Total	6.70	2.96	7.70	2.33	8.00	1.92
Open-Ended	New	4.53	3.40	5.54	3.31	7.09	1.95
	Return	6.72	2.08	6.84	2.33	6.91	1.79
	Total	5.47	3.10	6.10	2.99	7.01	1.88
Limits	New	3.59	3.53	5.42	3.14	6.82	2.22
	Return	6.43	2.37	6.69	2.22	7.19	1.44
	Total	4.80	3.39	5.97	2.85	6.98	1.92
Homesick	New	3.49	3.48	4.86	3.60	8.30	1.23
	Return	6.44	2.17	6.73	2.22	8.07	1.65
	Total	4.75	3.32	5.66	3.22	8.20	1.42

Note: See Table 1 for complete listing of the item wording.

ported no change in perceptions of difficulty from first to last training days, but an increase was reported by one-month-on-the-job. New staff members rated knowing locations of buildings to be more difficult than returning staff, but even this was perceived as a low level of difficulty (3 on a 9-point scale). For redirecting, paperwork, and homesickness, new staff members reported higher difficulty scores. Returning staff member ability scores were higher than new staff members.

Ability

In terms of "ability," both new and returning staff reported an increase throughout the summer; returning staff started with a higher self-perception of ability than new staff at the beginning and end of training, but convergence occurred at one-month-on-the-job (see Table 4).The reports from new staff members revealed high standard deviations at the first two measurement points. Further investigation is warranted to explore that variability, and why it decreases by one-month-on-the-job. Investigation

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of the content-item means (see Table 5) revealed significant differences on all of the 24 content items.

DISCUSSION

Three interesting areas of consideration are generated by the perception differences between new and returning staff members at the different points of time during their camp experience: (1) the relative lack of change in perception of difficulty by returning staff throughout the experience, (2) the growth in perceptions of ability by new staff members at each measurement point, and (3) the convergence of the two groups by the one-month-on-the-job measure in terms of both difficulty and ability. This study does not allow for causation between the timing of the change. It does, however, provide a platform for discussion and examination of possible explanations that could provide insight into the learning processes during the employment of a camp staff member.

Although differences existed between new and returning staff-member perceptions, the lack of change in perception of difficulty by returning staff throughout the experience is curious given that many of the skills and knowledge items are never fully mastered as either youth development leaders or as parents. The new staff-member perceptions of "difficulty" rose slightly, but not significantly from the first to last days of training, yet were still significantly lower than returning staff. This difference might mean that there was still not an understanding of how difficult the skills and knowledge would be to apply in the camp setting, despite possible prior experience working with children or preconceived ideas of what the job would entail. The exceptions to this trend were in the areas of dealing with homesickness and re-directing behavior. The "difficulty" rose dramatically, suggesting a realization that the more you know about those two skills, the more you realize the difficulty and complexity involved in addressing them.

The returning staff-member ratings of "ability" were higher than new staff-member reports and increased between the first and last days of training. This reported increase could be attributed to a combination of having a different set of peers to use as a reference set and confidence gained as a result of receiving additional training. New staff-member reports of "ability" rose more dramatically than the returning staff members. This change could indicate either an increased sense of confidence related to the ability to do the job or, alternatively, awareness that the camp administration wanted them to be competent at that point in time.

The convergence of the scores from returning and new staff by the one-month-on-the-job measure suggested a socialization process leading to a sense of community norms. This development of community is one of the goals of the formal camp orientation and is a stated purpose for many summer camps. The fact that the third measurement point for new staff members was consistent with the beginning point for the returning staff supported the carry-over of information from the previous season. This result suggested the need for further research to understand the socialization process and to explore the dynamic interplay between perceptions of the new staff and whether they felt constrained by the perceptions of the returning staff.

In terms of applications for staff training, two major points need to be considered: returning staff-member perceptions, and continuing education for both new and returning staff. This study provided a first step to understand returning staff members. For example, what can be done to build and strengthen the motivation so as to demonstrate growth as a returning staff member? Growth can be demonstrated in seeing the difficulty in a situation with complex layers or recognizing one's ability to handle the situation in different ways. Motivation may be strengthened by probing returning staff to share the complexities they observe, to encourage them to admit levels of difficulty, and be more open to educational opportunities to address these areas. This progression may lead to the possibility of returning staff being able to document growth in themselves. The notion of introducing concepts during the pre-camp orientation, and then going into greater depth concerning these concepts once staff have had the opportunity to experience them, is supported by these data for both new and returning staff. The motivation literature (Vroom, 1964; Porter & Lawler, 1968) suggests an increased level of receptivity once the need or value is recognized internally rather than stressed externally.

Leading and training summer camp staff requires a delicate balance between building confidence and competence while intentionally building recognition of the complex and serious responsibility of the position. The process and individual content item information allowed for the exploration of training areas that camp directors can emphasize and build on during the season. It is heartening to see the apparent development of community and the perceptions of new staff members who learned so much during the season, yet disheartening to see the perceived stagnation of learning by returning staff. This exploratory study provides a baseline and process from which to build a framework for understanding and documenting the perceptions of staff members. This information can serve as a foundation to increase training effectiveness leading to greater effectiveness with participants.

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MOTIVATIONS OF ELDERHOSTEL PARTICIPANTS IN OUTDOOR ADVENTURE PROGRAMS: A LIFE CYCLE PERSPECTIVE

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INTRODUCTION

The number of opportunities for older adults to participate in institutionally based outdoor adventure programs is steadily increasing. In a baseline study examining outdoor recreational programs in North America for adults over 50, 78% of the organizations surveyed (N = 179) offered some type of adventure experience as an option for this older population. The majority of the organizations surveyed (62%) began targeting this specific population during the 1990s, a notable increase from previous decades (Sugerman, 2000). Several factors have occurred that may explain the increase in opportunities for older adults to participate in outdoor adventure programs. Life expectancy has increased (Hooyman & Kiyak, 1993), the number of years that people are in retirement has increased (Krauss, 1997), individuals are living relatively healthy lives (McGuire, Boyd, & Tedrick, 1999), and many individuals have the discretionary income to be able to participate in leisure activities (Moody, 1994). Many organizations are taking advantage of these factors and offering a variety of educational and recreational outdoor adventure experiences to older adults.

Sugerman's (2000) study resulted in two key findings: 1) a wide variety of program formats available to clients ranging from adventure activities as part of another prescribed activity (e.g., day hiking in order to bird watch) to extended wilderness trips (e.g., 10-day canoe trip on a white water river) and 2) a lack of formal research in the area of outdoor adventure experiences for older adults, specifically on the motivations of older adults to participate in this programming area. To address the finding concerning research, a second study (N=782) conducted by Sugerman (2001) used the Recreation Experience Preference (REP) Inventory (Driver, 1977, 1983) to investigate general motivations of older adults to participate in outdoor adventure experiences. Data from the study indicated that the most frequently reported motivations were: 1) being in a natural environment, 2) being physically active, 3) learning about outdoor skills and the environment, and 4) being in a group of people with similar interests. The data also indicated that there were significant differences in motivation according to gender, age grouping (i.e., < 65 years vs. > 65 years), and program format. According to the study, women rated nature, physical fitness, learning, and social security to be more significant motivations for participation in outdoor adventure experiences than did men. Of these four reasons, only nature and learning were rated significantly different by the age groupings. Individuals less than 65 years of age rated both reasons higher than those respondents 65 or older. Individuals participating in programs involving overnight camping rated risk taking, learning, nature, and escaping physical pressure to be more significant motivations for participation than individuals participating in programs involving no overnight camping. Meeting new people was rated as a more significant motivation for those individuals participating in programs involving no overnight camping.

This manuscript examines the motivations of older adults to participate in outdoor adventure experiences based on whether or not they are retired to determine the association of motivation and retirement status. A particular focus for the paper is to better inform providers of outdoor adventure programs for older adults about the specific motivations of participants based on their stage of life cycle development. Understanding these motivations may aid in conducting effective and appropriate outdoor adventure programs for this population. Examining these motivations may also supply further information concerning adjustment to retirement and the role that outdoor adventure programming may play in life transitions.

Life Cycle Perspective

A growing body of research exists that examines the relationship between leisure motivation and human development, specifically life cycle issues. According to life span developmental psychologists, "development is a life-long process beginning at conception and ending at death" (Honzik, 1984, p. 309). Development is viewed not only as a biological process that peaks at maturity, but also as a psychosocial process that continues throughout an individual's life span. The term *life cycle* is used to depict the underlying order of the human life course, the universal sequencing of stages of individuals' lives. Various theorists have described the life cycle in terms of cognitive development (Piaget, 1964), moral development (Kohlberg, Levine, & Hewer, 1983), psychosocial development (Erikson, 1959; Levinson, 1986), and chronological development (Levinson, 1986; Linden & Courtney, 1953). The chronological stage of *adult* refers to early and middle adulthood; later adulthood is usually referred to as *aging*. According to Kermis (1986), aging can occur on at least three dimensions: chronological aging, biological-physiological aging, and psychosocial aging. Chronological aging is a time-based dimension; all individuals age as time passes. Biological/physiological aging is the point at which biological development has ceased and deterioration begins. Psychosocial aging refers to the psychological and social development (rather than decline) of the individual.

Leisure researchers have been interested in individual motivations for engaging in leisure activities as a means to measure psychosocial aging. Beard and Ragheb (1983) examined leisure motivation and developed a tool to assess the psychological and sociological reasons for participation in leisure activities. Through a factor analysis, the researchers theorized four psychosocial motives related to leisure participation in adults: 1) intellectual, 2) social, 3) competence-mastery, and 4) stimulus-avoidance. Adults are motivated to engage in leisure activities involving the intellectual stimulation of learning, exploring, discovering, creating, and imagining. The social motivations of leisure participation include the need for friendship and interpersonal relationships, and the need for the esteem of others. The competence-mastery component is the extent to which individuals participate in leisure activities to achieve, master, challenge, and compete. Another motivation is the drive to escape and avoid over-stimulating life situations and instead to seek solitude, rest, and relaxation.

Other theorists believe the motivations of individuals to participate in leisure are related to the issues and tasks that they face during the different stages in the life cycle (Tinsley, Teaff, Colbs, & Kaufman, 1985). Older adults (45-65) tend not to be as interested as younger adults in the acquisition of material goods and job-related successes, but tend to be more interested in evaluating past accomplishments and maintaining dignity, respect, and control. As family responsibilities decrease and economic resources increase, leisure patterns tend to be less home and family centered. The transition into retirement can result in dramatic changes in life roles, economic resources, and social involvement. At this developmental stage, leisure may provide a means of social integration and new sources of personal meaning. Research specifically on the motivations of older adults to participate in leisure experiences indicated that key motivations for this population included: 1) affiliation with others (Henderson, 1981), 2) self-determination and perceived competence (Mobily, Lemke, Ostiguy, Woddard, Griffee, & Pickens, 1993), and 3) instrumental needs (survival and personal effectiveness) and expressive needs (meaning and purpose) (Adair & Mowsesian, 1993).

Another factor contributing to leisure participation may be the interest from the older individual's point of view in *successful aging*. Researchers define successful aging as a combination of elements including low probability of disease and disease-related disabilities, high cognitive and physical functioning, and active engagement (Leviton & Santoro Campanelli, 1980; Palmore, 1979; Rowe & Kahn, 1997).

The *disengagement, activity, and continuity theories* are most frequently cited to explain successful aging as they focus on the individual's relative adjustment to aging (Ragheb & Griffith, 1982). The disengagement theory assumes that as individuals age they gradually withdraw from social interactions, in expectation of the roles assigned to them by society. The link to successful aging is seen as the older adult successfully plays out these new roles. The process is beneficial both to the individual and to society as older people desire the separation in preparation for ultimate death and the disengagement is necessary in society to make room for younger generations (McGuire, Boyd, & Tedrick, 1999).

In contrast, the activity theory maintains that successful aging depends on the ability of the individual to maintain social activity, not disengage from it. Individuals remain physically, socially, and mentally active, interacting with others from a variety of age groups. Through activity older adults are able to continue and take on new roles, which are self-selected rather than given to them by society (Ragheb & Griffith, 1982). The continuity theory holds that the relative degree of success in aging is "a function of personal style of adaptations and adjustment that [have] been developed over the course of one's life" (McGuire, Boyd, & Tedrick, 1999, p. 20). It is not society's expectations of disengagement or personal expectations of role development through activity that determine successful aging, but individual predisposition and situational opportunities.

METHOD

Respondents

Participants in the study (N = 782) were recruited from individuals enrolled in outdoor adventure programs through organizations associated with Elderhostel during the summer and fall of 2000. Elderhostel is a clearinghouse for organizations offering recreational and educational experiences to adults 55 and older (although spouses or adult companions younger than 55 may attend programs with the age-eligible participant). Experiences are typically administered through colleges, universities, and other educational institutions throughout the United States and Canada, typically take place during a six-day period, and typically include classes and field trips. The outdoor adventure programs are listed in the "Active Outdoor" category of the Elderhostel catalog and are described as "programs [that] vary from physically demanding activities such as rafting, camping, mountaineering, or ropes courses to lighter outdoor activities such as golfing, birding, nature photography and hiking" (Elderhostel, 2000, p. 137). Organizations appropriate for the study (N = 167) were selected from the Summer 2000 catalog based on two factors: 1) location in the United States and 2) whether or not the outdoor adventure program description matched the definition used in the study which was "an outdoor experience involving small groups of people participating in self-propelled activities such as hiking, canoeing, and cross country skiing" (Sugerman, 2000, p. 12).

Instrument

The instrument used in the study was the Recreation Experience Preference (REP) Inventory (Driver, 1977, 1983), a tool designed to "measure the extent to which specific experiences are desired and expected from leisure activities" (Driver, Tinsley, & Manfredo, 1991, p. 275). The REP Inventory consists of 21 general recreation experience preference *domains* (i.e., similar people), 42 *scales* within the domains that describe possible desired outcomes of a recreational experience (i.e., being with friends, being with similar people), and two *core statements* for each scale (84 total statements) to be used in empirical studies (i.e., to be with members of your group, to be with friends, to be with people who enjoy the same things you do, to be with people who have similar values) (Manfredo, Driver, & Tarrant, 1996). See Table 1 for a list of the scales and domains.

At least 50 empirical studies have been conducted to test the reliability and validity of the inventory (Driver, Tinsley, & Manfredo, 1991). Studies show that as long as the two core statements are used, the average inter-item correlation is .4 or greater and Cronbach's alpha

TABLE 1
Recreation Experience Preference (REP) Domains and Scales

Domain	Scale
Achievement/stimulation	Reinforcing Self Image
	Social Recognition
	Skill Development
	Competence Testing
	Excitement
Autonomy/leadership	Independence
	Autonomy
	Control/Power
Risk Taking	
Equipment	
Family Togetherness	
Similar People	Being with Friends
	Being with Similar People
New People	Meeting New People
	Observing Other People
Learning	General Learning
	Exploration
	Geography of Area
	Learn About Nature
Enjoy Nature	Scenery
	General Nature Experience
Introspection	Spiritual
	Introspection
Creativity	
Nostalgia	
Physical Fitness	
Physical Rest	
Escape Personal/Social Pressures	Tension Releaser
	Slow Down Mentally
	Escape Role Overloads
	Escape Daily Routine
Escape Physical Pressure	Tranquility
	Privacy
	Escape Crowds
	Escape Physical Stressors
Social Security	
Escape Family	
Teaching/Leading Others	Teaching/Sharing Skills
	Leading Others
Risk Reduction	Risk Moderation
	Risk Avoidance
Temperature	

exceeds .75 (Driver, Brown, & Peterson, 1991; Graefe, Ditton, Roggenbuck, & Schreyer, 1981; Manfredo, Driver, & Tarrant, 1996; Tinsley, Driver, & Kass , 1982). A meta-analysis by Manfredo, Driver, and Tarrant (1996) showed the "proposed factor structures provided a good fit for the data across response scale, instruction set, geographic location, and type of recreation area" (p. 197). The findings offered evidence supporting the reliability, and to some extent the construct validity of the REP item scales.

The survey instrument for this study consisted of the 84 core statements from the REP Inventory arranged randomly to avoid obvious repetition of concepts. A Likert Scale with six response alternatives ranging from "not important" to "extremely important" was given for each statement (Driver, Tinsley, & Manfredo, 1991). Respondents were instructed to read each statement and rate the level of importance for each statement based on their reasons for participating in the Elderhostel outdoor adventure program. The survey also contained demographic questions relating to gender, age, retirement status, marital status, educational background, and racial status. Two open-ended questions were included for participants to provide further information on their reasons for current participation as well as examples of their previous participation in outdoor adventure activities.

Data Collection

Packets containing the survey instrument, a letter with instructions from the researcher, and an introductory letter from the Elderhostel Vice President of Education were sent to the contact person of identified organizations (i.e., located in the United States and program descriptions matching the definition of "outdoor adventure experience" used in the study) one to two weeks prior to the beginning date of each program. The instrument was administered on the first day of each program to participants by the organizational contact person or an individual designated by the contact person. This process ensured consistency and determined motivations prior to the outdoor adventure experience. After participants completed the survey, the packet was returned to the researcher.

Return Rate

Out of the initial 167 programs, 47 were cancelled due to low enrollment or inclement weather. Return responses were received from 72 of the remaining 120 programs, indicating a 60% return rate. The total number of participant surveys returned from the 72 programs was 817. The number of responses per program varied, depending on program format, from seven to 36. It was decided to use only surveys that had at least 80% of the responses completed, reducing the total number to 782 (96% of the surveys completed). Nine surveys were returned from individuals younger than 50 (1.2% of the total population). Because of the small number, it was decided to keep these surveys in the study.

RESULTS

As a result of the significant effects of gender in participant motivation previously identified (Sugerman, 2001) the current analysis of motivation and skill development level used a multivariate analysis of variance (MANOVA) controlling for gender. Table 2 outlines the descriptive statistics for the 21 domains for both groups based on retirement status (retired versus not retired). The multivariate effect for retirement status was significant, F(21, 693) = 4.39, p = .001. The percent of unexplained variance, as indexed by the Wilks' λ was 88%; thus retirement status explained 12% of the variance for participant motivation. According to the univariate analyses, individuals who were not retired rated four domains significantly higher as a motivation than individuals who were retired: 1) Escape Personal Pressure F(1,713) = 27.85, p = .001; 2) Escape Physical Pressure F(1,713) = 10.00, p =.05; 3) Nature F(1,713) = 4.21, p=.05 4); Physical Rest F(1,713) = 4.51, p = .05. Individuals who were retired rated two domains significantly higher as a motivation than individuals who were not retired: 1) Introspection F(1,713) = 7.27, p = .05; 2) Nostalgia F(1,713) = 3.74, p = .05.

TABLE 2
Descriptive Statistics and Univariate ANOVAs of REP Domains for Retired and Not Retired Groups

Domain	Retired (n = 535)		Not Retired (n = 181)				
	M	*SD*	*M*	*SD*	*F*	*p*	α
Nature	5.03	0.89	5.25	0.77	4.21	.041	.86
Physical Fitness	4.98	0.99	5.02	0.97	0.05	.831	.80
Learning	4.73	0.95	4.92	0.79	3.05	.081	.90
Social Security	3.78	1.46	3.89	1.44	0.02	.883	.83
Similar People	3.56	1.06	3.61	1.02	0.00	.983	.71
New People	3.40	1.06	3.45	1.01	.046	.829	.78
Achievement	3.18	1.05	3.36	1.02	2.21	.138	.89
Family Togetherness	2.94	1.82	2.62	1.68	1.38	.240	.85
Physical Rest	2.92	1.33	3.20	1.50	4.51	.034	.67
Nostalgia	2.89	1.41	2.67	1.42	3.74	.054	.68
Escape Personal	2.79	1.06	3.33	1.16	27.85	.000	.87
Creativity	2.52	1.31	2.77	1.39	3.21	.073	.73
Introspection	2.44	1.26	2.80	1.37	7.27	.007	.89
Autonomy	2.40	1.17	2.51	1.19	0.75	.385	.88
Temperature	2.36	1.43	2.24	1.39	1.23	.269	.80
Escape Physical	2.21	0.97	2.49	1.04	10.00	.002	.85
Risk Taking	2.14	1.21	2.27	1.17	1.69	.193	.79
Risk Reduction	2.06	0.99	2.08	0.95	0.08	.772	.77
Equipment	1.95	1.10	1.79	1.00	1.25	.265	.71
Teaching	1.74	0.81	1.66	0.71	0.18	.670	.83
Escape Family	1.47	1.00	1.50	1.05	0.01	.940	.90

DISCUSSION

The results indicated that although many similarities existed between the retired and not retired groups, some notable differences occurred based on retirement status. Both groups were motivated to be involved in nature, be physically active, be involved in a learning atmosphere, be in a group of respectful peers where they could meet people who had similar interests, become competent in the program area, and rest and relax. These findings support Beard and Ragheb's (1983) factor analysis on leisure motivations in adults. The Elderhostel participants were motivated by the intellectual stimulation of learning, exploring, and discovering. Their social motivations included the need for friendship and interpersonal relationships, and the need for the esteem of others. Their motivations concerning competence-mastery were seen by their desire to achieve, master skills, and challenge themselves. They were also motivated by the drive to escape and avoid over stimulating life situations and instead to seek solitude, rest, and relaxation. The results of the study also support the activity theory of aging. Research supports the relationship between activity and successful aging (Seigenthaler, 1996), with the caveat that the quality of the activity is most important as opposed to the frequency of activities (Hull, 1990). The value of activity is determined by its meaning to the individual. The individuals in the study were engaged in cognitive, physical, and social activities through participation in the outdoor adventure experience. Their motivations for participating in the program suggest that the activities had personal meaning to them.

Several significant differences in motivations were based on retirement status. Individuals who were not yet retired were more motivated to be in nature, escape the physical and personal demands of daily life, and experience the tranquility of the wilderness than individuals who were retired. Those individuals who were retired were more motivated by the opportunity to reflect on their personal values, and to remember similar past experiences. This finding suggests that older adults may be using outdoor adventure activities as a means to emotionally prepare for retirement or to aid in the transition into retirement. The wilderness environment is conducive to escaping the physical and personal demands of daily life, thus allowing for the time and space to reflect and plan. Research on retirement adjustment indicates that successful adjustment is more likely to occur as a result of careful preparation for changes in the social structures of the individual (Kim & Moen, 2001). Participation in outdoor adventure experiences may provide the opportunity to gather thoughts, share ideas with others in a similar situation, and emotionally prepare for and cope with life cycle changes.

The idea that individuals may be participating in outdoor adventure experiences for specific reasons related to retirement is valuable information that can be used by program administrators and instructors to guide marketing, planning, and implementing programs. In order to provide high quality experiences, strategies must be developed that consider the meaning of the experience sought by participants. The study indicated that overall motivations were similar for all participants regardless of whether they were retired or not. Program administrators and instructors should be cognizant of these motivations and plan and implement programs so that these outcomes occur for all programs, regardless of retirement status (see Sugerman, 2001). In addition, intentional planning of courses to reflect the skills, ideals, and values important in retirement may provide a format that allows participants to focus on this period of transition. Intended outcomes of programs might include the following: 1) a sense of perspective on life, 2) a sense of personal meaning in life, 3) a sense of personal renewal, 4) confidence and belief in self, and 5) belief in the ability to make positive changes (Colorado Outward Bound, nd). Specific strategies used to reach the intended outcomes may include the following:

- Use of the peer group with similar issues as a support system
- Development of a social environment conducive to sharing thoughts and ideas
- Use of staff who have life experience and knowledge of life transitions
- A flexible course structure that allows time for conversations and sharing
- Program activities and challenge levels that allow for conversations and sharing
- Specific activities around life transitions (i.e., journals, guided discussions)
- Individual time for reflection (i.e., solos)

This research suggests the value of leisure experiences, specifically outdoor adventure experiences, to people who are in transition from one life stage to another. Outdoor adventure experiences may have value in providing the time and space for individuals to process the possible changes brought on by life transitions. Through involvement in outdoor adventure experiences that involve physical and emotional challenge, individuals may become more confident and competent. The activities involve being fully present and not distracted by the demands of modern life, allowing time to reflect and process. The natural environment provides an atmosphere that may clear the mind, allowing for reflection and planning (Miles, 1987). Additional intentional programming may provide specific opportunities for participants to focus on the transition. Further investigation concerning the use of outdoor adventure programming for individuals in life transitions might examine the role that adventure programming can play in the process of clarifying life purpose and direction.

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THE RELATIONSHIP OF MOTIVATION FACTORS TO LEVEL OF DEVELOPMENT IN OUTDOOR ADVENTURE RECREATIONISTS

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INTRODUCTION

A growing body of empirical studies tests theories of developmental level in a recreation activity. Most are based on two prominent leisure theories: specialization (Bryan, 1977, 1979) and amateur/professionalism or "serious leisure" (Stebbins, 1979, 1992). A parallel group of studies has focused on understanding the developmental levels of outdoor adventure (or risk) recreation behavior, primarily using the Adventure Recreation Model (ARM) (Ewert, 1989) as a cornerstone. Both areas of the literature have sought to understand developmental levels in relation to other variables, including motivation. The purpose of this study was to determine the motivation factors that are related to participants' level of development in outdoor adventure recreation pursuits. This study will further test the ARM, add to the empirical body of knowledge in the areas of recreation specialization and "serious leisure," and integrate these two parallel areas of study.

Motivation

Motivation to participate in a recreation activity has been explained by expectancy-value theory (Fishbein & Ajzen, 1975), which states that motivation is a function of the attractiveness of outcomes, and a belief that engaging in an activity will likely produce desired results. This expectation fosters a positive attitude and intention to participate, and behaviors that facilitate goal achievement are evaluated positively.

Expectancy-value theory acknowledges that not only may individuals have a variety of motives for participating in an activity, but also persons within the same activity may seek totally different outcomes. While some recreation research has focused on motives of those participating in different activities (e.g., the study of cross-country skiers and snowmobilers by Jackson & Wong, 1982), other studies examined the goals of those participating in the same activity (e.g., Ditton, Fedler, & Graefe's 1982 study of types of river floaters).

Recreationists' Growth & Development

Since motives have been shown to be influenced by level of past experience (Schreyer, Lime, & Williams, 1984), it seems likely that they would differ by participants' level of development. As noted above, theories of specialization (Bryan, 1977, 1979) and amateurism (Stebbins, 1979, 1992) often form the basis for characterizing participants' growth and development in leisure activities.

Recreation Specialization

Based primarily on outdoor recreationists, Bryan (1979) described participants on a continuum ranging from novice to specialist, with stages defined as a function of one's time, money, equipment, skill, and psychic commitment to an activity. Moreover, at each level of specialization, distinctly different preferences and behaviors emerge. As specialization increases, attitudes and values about the activity change. Importantly, Bryan notes that what constitutes a reward or success can change over time, helping to explain the progression toward higher degrees of specialization.

Bryan (1979) wrote, "...the specialization dimension likely underlies *any* recreational activity. Yet the length of the continuum will differ for different activities, and the activities themselves can be arranged on a specialization continuum" (p. 88). By their nature, certain activities may be more highly or less specialized or have wider or narrower ranges of specialization. Besides creating a typology of fly fishermen, Bryan also hypothesized typologies of specialization for the following outdoor activities: photography, hiking and backpacking, mountain climbing, skiing, canoeing, birdwatching, and hunting. Based on Bryan's work, Berl and Chilman (1981) developed an additional typology of rock climbing in the Midwest.

Research focusing on specialization's relationship to other variables abounds, with many types of leisure activities being examined. For example, some studies have focused on the relationship between specialization and environmental-setting preferences of hikers (Virden, 1986) or kayakers (Schuett, 1994), as well as the relationship between specialization and behavioral choices (easy vs. challenging hunt) of goose hunters (Kuentzel & Heberlein, 1992). Specialization has also been applied to perceptions of crowding among hikers (Graefe, Donnelly, & Vaske, 1986) and river users (Hammitt, McDonald, & Noe, 1984; Tarrant, Cordell, & Kibler, 1997) and to perceptions of conflict (Todd, 1987; Watson, Niccolucci, & Williams, 1994).

While most studies of specialization are based on Bryan's (1979) assumption that people progress and develop from novice to expert in a linear fashion, Kuentzel and Heberlein (1997) tested a social status framework of specialization, implying that participants enter an activity in different ways (in this case, 354 sailors at the Apostle Islands National Lakeshore in Wisconsin) based on status. Their results, however, did not support this approach, but did endorse Bryan's linear concept of a developmental continuum.

When Scott and Godbey (1994) applied the theory of specialization to contract bridge players, however, they did not find evidence of a linear continuum. The authors proposed that four types of players could be arranged on a specialization continuum ranging from occasional players to regular social players, regular duplicate players, and tournament players. As one moved from occasional to tournament play, specialization was predicted to increase based on intensity of identification, meaning of participation, frequency of play, game and setting preferences, and orientation to competition and skill development. Results of the study, however, indicated that the four types of play did not represent a developmental sequence and should not be arranged on a continuum; many social players, in fact, resisted specialization and had no desire to become serious bridge players. Scott and Godbey concluded that the four types of play represent unique styles of involvement played out in different social worlds.

Likewise, Kuentzel and McDonald (1992) discovered that distributions of commitment and lifestyle do not necessarily increase in a linear fashion but may scatter widely with increased experience. For river users, commitment was found to increase with experience level in the early years but diverged later at the highest levels of experience. The authors wondered if a ceiling effect on commitment occurs.

Amateur/Professional Growth

Perhaps best known for applying the commitment component most thoroughly is Stebbins' (1979, 1992) study of "serious leisure" and amateurism in art, entertainment, science, and sport. According to this theory, as an activity becomes more important to the participant, he or she may progress from *dabbler* to *novice*, *amateur participant*, or *amateur devotee*, or may even become a paid *professional*.

Stebbins (1992) also describes the amateur's development in terms of a career history. He proposed the following five stages of progression/retrogression: beginning, development, establishment, maintenance, and decline. Stages are characterized by changes in variables such as knowledge, skill/ability, participation, experience, and dedication. Movement through the stages is affected by changes or encounters beyond the person's control, termed *career contingencies*. Participants also recognize, interpret, and control past, present, and future events associated with the work or leisure role; these significant decisions and critical points are called *turning points* in a career. Scanlan, Ravizza, and Stein (1989) documented evidence of these concepts in a study of elite figure skaters.

Level of Development

Combining aspects of the above theories, several studies have operationalized "level of development" as a single measure. Data from quiltmakers (Todd, 1997; 1999a; 1999b; Todd & Graefe, 2001) and SCUBA divers (Todd, 2000) verified that having respondents choose a category of beginner, intermediate, advanced, expert, or "post-expert – not the expert I once was" adequately reflected development-related factors. In all but one case, mean scores for indices measuring equipment owned, knowledge, experience, perceived skill, participation, commitment, and amateur/professional growth increased from beginner to expert and then decreased for post-experts. (Due to its cumulative nature, diving experience was the exception to this pattern; this variable continued to increase for post-experts.)

Adventure/Risk Recreation Behavior

A parallel, but similar, group of studies has focused on understanding the developmental levels of outdoor adventure (or risk) recreation behavior in relation to other variables (Anderson, Anderson, & Young, 2000; Ewert, 1985; Ewert & Hollenhorst, 1989; Robinson, 1992). The Adventure Recreation Model (ARM), first proposed by Ewert (1989) and tested by Ewert and Hollenhorst (1989), differentiates adventure recreation pursuits from other outdoor recreation activities based on the notion of "seeking risk and uncertainty of outcome" (p. 8). The ARM is based on the personal attributes of the participant, including variables noted previously as being related to level of development: level of engagement or experience, frequency of participation, and skill level. These personal attributes are related in predictable ways to variables such as decision-making locus of control, social orientation, preferred level of risk, and environmental orientation (see Figure 1). A second model of participation in risk recreation was generated by Robinson (1992), who presented phases and transitions of long-term (enduring) involvement in adventure activities.

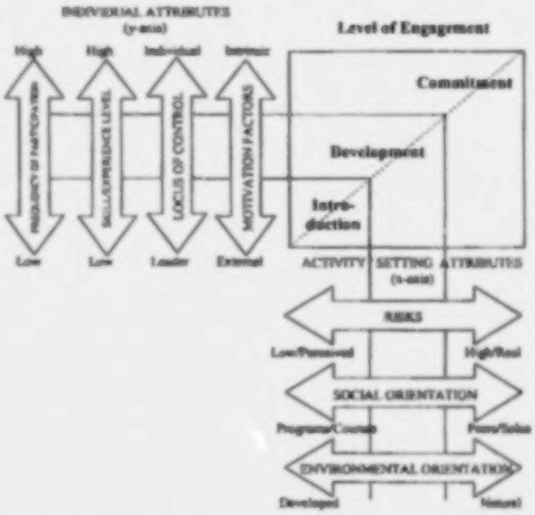
INDIVIDUAL ATTRIBUTES
(y-axis)
High
High
Individual
Intrinsic
FREQUENCY OF PARTICIPATION
SKILL/EXPERIENCE LEVEL
LOCUS OF CONTROL
MOTIVATION FACTORS
Low
Low
Leader
External
Level of Engagement
Commitment
Development
Intro-duction
ACTIVITY SETTING ATTRIBUTES
(x-axis)
RISKS
Low/Perceived
High/Real
SOCIAL ORIENTATION
Programs/Courses
Peers/Solos
ENVIRONMENTAL ORIENTATION
Developed
Natural

Figure 1. The Adventure Recreation Model by Ewert and Hollenhorst (1989).

Motivation & Level of Development

In each of the above theories, individuals at different stages tend to place importance on, focus on, or strive for different outcomes. Studies suggest that the more specialized and serious participants are about their leisure pursuits, the more important intrinsic rewards of involvement and competence become. Notably, Schreyer, Lime, and Williams (1984) found that veteran river recreationists ranked motives such as "to develop my skills" and "to test my abilities" much higher than novices. Furthermore, with higher levels of experience, the structure of the motive factors became increasingly complex (Williams, Schreyer, & Knopf, 1990).

Going beyond experience use history, Kauffman (1984) tested Bryan's conceptual framework of recreation specialization (1979) by focusing on the changing rewards, expectations or benefits canoeists received from canoeing. He discovered that as 491 participants became more specialized, their motives for canoeing changed.

At least two levels of specialization emerged based on differences between scores for nature, exploration, affiliation, and temporary escape, while even larger differences were found for three other expected rewards. Highly specialized canoeists were found to canoe for exercise, recognized the importance of their equipment to their experience, and received a sense of achievement from their experience.

Studies of specialized anglers have also examined motivation. Dawson, Brown, and Connelly (1992) discovered that, instead of being influenced by specialization factors alone, anglers' behavior was affected by expectations of various outcome probabilities. Dawson (1997) then used a clustering technique to detect differences in motivational profiles of distinct angler sub-populations within one level of specialization. Designation of specialization level in these studies, however, was based on anglers' technique and setting preferences. Examining these clusters based on other development-related factors, such as experience level, skill, knowledge, frequency of participation, commitment, and amateur/professional growth, would be interesting.

In the original conceptualization of the ARM, Ewert (1989) included motivation as a principal variable related to level of development. In this case, however, level of development was based solely on one variable: level of engagement or experience. Participants were labeled "introductory" if they marked responses of 1 to 3 on the 9-point Likert scale, "development" for scores of 4 to 6, and "committed," 7 to 9. Subsequent testing (Ewert & Hollenhorst, 1989) led to the elimination of motivation from the model, since only two motives, skill development and competition, were significantly (but weakly, $r = .19$ for both) related to level of engagement or experience. However, further testing by Anderson, et al. (2000) did find support for motivation as a key variable related to level of engagement. These authors not only found stronger relationships for skill development ($r = .45$) and competition ($r = .25$) with level of engagement, but also uncovered moderately strong relationships for risk taking ($r = .50$), experiencing nature ($r = .42$), excitement ($r = .39$), expressing creativity ($r = .39$), fun and enjoyment ($r = .38$), and challenge ($r = .31$).

Purpose of the Study

The purpose of this study was to determine the motivation factors that are related to participants' development in outdoor adventure recreation pursuits. Based on the above review of literature, it was expected that adventure recreationists' motives would differ by level of development. Specifically, it was hypothesized that motivation would become more intrinsic as level of development increased from beginner to expert. Unlike previous adventure recreation research based on the ARM, this study also attempted to portray more broadly level of development, as well as isolate major motivational themes of participants.

METHODS

Participants & Setting

Subjects for this study were 164 undergraduate recreation majors from separate, but similar, sections of a required summer session Outdoor Education Practicum course. Regardless of section, the course enrolled eligible recreation majors of all concentrations (outdoor recreation and education management, therapeutic recreation, recreation and leisure program delivery, management of leisure services, or no concentration declared), was staffed at a 1:7 ratio from a pool of similarly trained and seasoned leaders, and shared a common syllabus, schedule and format. (The 13-day course included 7 days in a camp-like resident outdoor education setting, with amenities, dining facilities, and a structured program followed by a 6-day wilderness canoe trip in New York State's Adirondack Park.) Sections differed primarily in terms of when they were offered (i.e., late May to late June of 1999, 2000, or 2001). Participants ranged in age from 18 to 50 with an average age of 22.9. 56 percent were females, 44 percent were males.

Instrumentation

Subjects completed the Adventure Recreation Model Instrument (Ewert & Hollenhorst, 1989) on the last full day of the course (100% response rate). The instrument included items to measure variables related to level of development (experience, perceived skill, and frequency of participation), 19 motivations for participation, plus other user (locus of decision-making) and setting (type of environment, preferred level of risk, social orientation) attributes. Only the sections pertaining to level of development and motivations were pertinent to this study.

Experience and perceived skill were measured by separate 9-point Likert scales, where 1 represented "little or no experience" or "beginner with little or no skills" and 9 was "a great deal of experience" or "expert, highly skilled," respectively. Frequency of participation was measured with 5 categories: none, 1-2, 3-6, 7-10, or more than 10 adventure experiences within the last two years. The questionnaire also used a 9-point Likert scale ranging from "not at all important" (1) to "very important" (9) to which subjects responded for each motive on the questionnaire.

Data Reduction

The three items pertaining to level of development were significantly correlated ($p < .01$) with each other: Pearson's correlation coefficient between experience and perceived skill was .90; frequency of participation was also positively correlated to perceived skill ($r = .48$) and experience ($r = .45$). Since two different scales of measurement were used among the three variables, the items were converted to z-scores before being combined into a "level of development" scale. Reliability analysis yielded a Cronbach's alpha of .82, with the alpha increasing to .95 if frequency of participation were deleted from the scale. However, because retaining all three items would give a more "rounded" portrayal of factors related to level of development found in similar studies (Todd, 1999b, 2000) and .82 was at an acceptable alpha level, all items were kept in the scale. The average of the three z-scores was then computed for each respondent, with final index scores ranging from -2.30 to 1.66 (n = 164). Because the authors wanted to compare the results of this investigation to those of motivational studies that used a categorical measure of level of development (Todd & Graefe, 2001; Todd, Graefe, & Mann, in press), each respondent was assigned to one of four categories, with z-score cutoffs approximating the percentage breakdown of developmental levels established in a previous adventure recreation study involving SCUBA divers (Todd, 2000): beginner (24.4%, n = 40), intermediate (36.0%, n = 59), advanced (30.5%, n = 50), and expert (9.1%, n = 15).

Factor analysis (principal components method of extraction, varimax rotation) was used to reduce the 19 motives into factors representing primary themes or reasons for participation. Cronbach's alpha was then utilized to test inter-item reliability among the items in each factor having an Eigenvalue of at least 1.00. One-way analysis of variance was used to determine if a difference existed among mean scores for each factor by level of development. To compare the differences between mean scores for each pair of developmental levels, Tukey's Honestly Significant Differences (HSD) was applied as a post hoc test if the F-value was significant ($p < .05$). To ensure that the scaled factors were not masking the effects of any component statement, each motive was also individually tested using the same procedures.

RESULTS

Motivations

Overall, respondents rated "for fun and enjoyment" as their most important motive for participating in adventure experiences (mean = 8.18), followed by "for the personal challenge" (7.74), "for feelings of achievement" (7.50), and "to do something new/different" (7.48) (see Table 1). At the other extreme, respondents rated the following four motives as being least important: "for status among my peers" (3.25), "for my image in society" (3.26), "because of requests by others" (3.77), and "for the competition (with others or environment)" (4.91).

TABLE 1
Motives for Participation in Adventure Experiences

Motive	Mean	SD
For fun and enjoyment	8.18	1.08
For the personal challenge	7.74	1.31
For feelings of achievement	7.50	1.38
To do something new/different	7.48	1.38
For excitement and stimulation	7.35	1.40
To experience nature	7.33	1.55
To develop skills	7.09	1.60
For physical fitness	7.00	1.55
To make friends	6.76	1.85
To enhance feelings of myself	6.69	1.96
To take risks	6.37	1.76
For my career/job	6.18	2.16
To express my creativity	6.16	2.00
To socialize	5.90	1.95
To experience a sense of control	5.76	1.96
For the competition (with others or environment)	4.91	2.47
Because of requests by others	3.77	1.99
For my image in society	3.26	2.05
For status among my peers	3.25	1.95

Note. Values are mean scores on a 9-point scale anchored as follows: 1=not at all important and 9=very important.

When these data were reduced using factor analysis, six factors (explaining 68.2% of the variance and having acceptably high scale reliabilities – see Table 2) emerged: *challenge* (mean scale score of 7.17, Cronbach's alpha of .85), *image* (mean of 3.80, alpha of .73), *self-efficacy* (6.53, alpha of .71), *learning* (6.87, alpha of .63), *social interaction* (6.33, alpha of .78), and a single item *fun* (8.18). *Challenge* was the strongest factor, explaining nearly 30% of the variance. This factor contained six items related to personal challenge, novelty, fitness, excitement, risks, and skill development. The *image* factor added 12.5% of explained variance. The four items in this factor were related to extrinsic pressures or stature among others. *Self-efficacy* (7.5% of explained variance) contained four items measuring feelings of control, achievement, creativity, and self-esteem. The three items in the *learning* factor (6.9% of explained variance) reflected career-related motives, including developing skills and experiencing the field-related natural environment. *Social interaction* (6.4% of explained variance) was composed of two items: to make friends and to socialize. The final one-item factor *fun* added 5.3% of explained variance.

Hypothesis Testing

When mean motive scores were compared among levels of development, four of the six factors produced significant F-values ($p < .05$) (Table 3). These four (*challenge*, $F(3,160) = 5.47, p < .01$; *self-efficacy*, $F(3,160) = 4.26, p < .01$; *learning*, $F(3,160) = 6.96, p < .01$; and *fun*, $F(3, 160) = 3.11, p < .05$) reflected intrinsic motivations of participation, while the two that did not differ by level of development (*image*, $F(3,160) = 2.07, p = .11$; and *social interaction*, $F(3,160) = 0.58, p = .63$) were more extrinsic in nature.

While the *fun* factor was only able to reveal one significant difference among levels of development using Tukey's HSD post hoc test, *self-efficacy* uncovered two differences, and both *challenge* and *learning* detected three. Specifically, beginners had lower *fun* scores than advanced participants (mean of 7.75 vs. 8.40). For *self-efficacy*, beginners (mean = 6.02) differed significantly from both advanced (6.75) and experts (7.28). In the cases of *challenge* and *learning*, beginners had significantly lower scores (6.63 and 6.10, respectively) than all other intermediate, advanced, and expert respondents (7.23, 7.34, and 7.80 for *challenge* and 6.98, 7.71, and 7.44 for *learning*, respectively).

When each individual motive was tested using the same procedures, 13 of the 19 motives produced significant F-values (see Table 3). The most discriminating single item was "to take risks," $F(3, 159), p < .01$, which uncovered four significant differences among levels of development. Beginners (5.33) had lower scores than intermediates (6.34), advanced (6.82), and experts (7.67), plus intermediates also differed significantly from experts. In some cases, the pat-

TABLE 2
Results of Factor Analysis of Motive Items (Principal Components Extraction, Varimax Rotation)

Factor Name and Item Content/Loading	**Factor 1:** ***Challenge***	**Factor 2:** ***Image***	**Factor 3:** ***Self-efficacy***	**Factor 4:** ***Learning***	**Factor 5:** ***Social Interaction***	**Factor 6:** ***Fun***
For the personal challenge	.80					
To do something new/different	.75					
For physical fitness	.74					
For excitement and stimulation	.62					
To take risks	.57					
To develop skills	.52			.63		
For status among my peers		.85				
For my image in society		.80				
Because of requests by others		.66				
For the competition (with others or environment)		.60				
To experience a sense of control			.77			
For feelings of achievement			.63			
To express my creativity			.60			
To enhance feelings of myself			.57			
For my career/job				.73		
To experience nature				.62		
To make friends					.86	
To socialize					.71	
For fun and enjoyment						.82
Eigenvalue	5.61	2.38	1.43	1.32	1.22	1.00
Proportion of variance explained	29.6%	12.5%	7.5%	6.9%	6.4%	5.3%
Cumulative variance explained	29.6%	42.1%	49.6%	56.5%	62.9%	68.2%
Mean scale importance score	7.17	3.80	6.53	6.87	6.33	8.18
Cronbach's alpha	.85	.73	.71	.63	.78	--

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TABLE 3
Motivation Factors and Individual Motives: One-way Analysis of Variance Using Mean Scores of Respondents with Different Levels of Development

Statement	Total (n=164)	Level of Development Beginner (n=40)	Intermediate (n=59)	Advanced (n=50)	Expert (n=15)	F	p	# of Differences Detected
FACTOR 1: CHALLENGE	**7.17**	**6.63^{a}**	**7.23^{b}**	**7.34^{b}**	**7.80^{b}**	**5.47**	**.001**	**3**
For the personal challenge	**7.74**	**7.23^{a}**	**7.73^{ab}**	**7.98^{b}**	**8.33^{b}**	**3.84**	**.011**	**2**
To do something new/different	7.48	7.15	7.71	7.38	7.73	1.59	.194	n.s.
For physical fitness	7.00	6.85	6.95	7.00	7.60	0.85	.469	n.s.
For excitement and stimulation	**7.35**	**6.73^{a}**	**7.41^{ab}**	**7.50^{b}**	**8.27^{b}**	**5.40**	**.001**	**2**
To take risks	**6.37**	**5.33^{a}**	**6.34^{b}**	**6.82^{bc}**	**7.67^{c}**	**9.61**	**.000**	**4**
To develop skills	**7.09**	**6.45^{a}**	**7.25^{ab}**	**7.38^{b}**	**7.20^{ab}**	**3.00**	**.032**	**1**
FACTOR 2: IMAGE	3.80	3.33	4.10	3.88	3.60	2.07	.106	n.s.
For status among my peers	**3.25**	**2.[illegible]3^{a}**	**3.69^{b}**	**3.34^{c}**	**2.47^{c}**	**2.73**	**.046**	**0**
For my image in society	3.26	2.68	3.49	3.64	2.67	2.39	.071	n.s.
Because of requests by others	**3.77**	**3.73^{ab}**	**4.24^{a}**	**3.56^{ab}**	**2.73^{b}**	**2.71**	**.047**	**1**
For the competition (with others or environment)	**4.91**	**4.15^{a}**	**4.98^{ab}**	**4.96^{ab}**	**6.53^{b}**	**3.63**	**.014**	**1**
FACTOR 3: SELF-EFFICACY	**6.53**	**6.02^{a}**	**6.50^{ab}**	**6.75^{b}**	**7.28^{b}**	**4.26**	**.006**	**2**
To experience a sense of control	**5.76**	**5.33^{a}**	**5.49^{ab}**	**6.10^{ab}**	**6.87^{b}**	**3.25**	**.023**	**1**
For feelings of achievement	**7.50**	**7.25^{a}**	**7.37^{a}**	**7.58^{ab}**	**8.40^{b}**	**2.90**	**.037**	**2**
To express my creativity	**6.16**	**5.33^{a}**	**6.17^{ab}**	**6.72^{b}**	**6.47^{ab}**	**3.94**	**.010**	**1**
To enhance feelings of myself	6.69	6.18	6.95	6.58	7.40	2.00	.116	n.s.
FACTOR 4: LEARNING	**6.87**	**6.10^{a}**	**6.98^{b}**	**7.17^{b}**	**7.44^{b}**	**6.96**	**.000**	**3**
For my career/job	**6.18**	**5.08^{a}**	**6.27^{b}**	**6.76^{b}**	**6.80^{b}**	**5.59**	**.001**	**3**
To develop skills	**7.09**	**6.45^{a}**	**7.25^{ab}**	**7.38^{b}**	**7.20^{ab}**	**3.00**	**.032**	**1**
To experience nature	**7.33**	**6.78^{a}**	**7.41^{ab}**	**7.38^{ab}**	**8.33^{b}**	**4.11**	**.008**	**1**
FACTOR 5: SOCIAL INTERACTION	6.33	6.36	6.53	6.14	6.07	0.58	.630	n.s.
To make friends	6.76	6.83	6.81	6.80	6.20	0.50	.686	n.s.
To socialize	5.90	5.90	6.24	5.48	5.93	1.38	.251	n.s.
FACTOR 6: FUN (For fun and enjoyment)	**8.18**	**7.75^{a}**	**8.25^{ab}**	**8.40^{b}**	**8.33^{ab}**	**3.11**	**.028**	**1**

Note. Means with different superscripts are significantly different ($p<.05$). Values are mean scores on a 9-point scale ranging from not at all important (1) to very important (9).

tern of results for individual items reflected that of its respective factor; for example, neither of the *social interaction* items detected significant differences, and all of the *learning* items did. However, within the *challenge* factor, novelty and physical fitness did not differ by level of development; neither did "for my image in society" within the *image* factor nor "to enhance feelings of myself" from the *self-efficacy* factor.

Generally, beginners were prominent from the rest, scoring lower than other respondents on 15 of 19 individual items (11 of them significantly so) and 5 of the 6 factors (4 of them significantly so). Although significant differences were not detected between each and every category of participants, patterns did emerge. As hypothesized, means tended to increase linearly from beginners to experts for items related to the intrinsic motives of *challenge, self-efficacy, learning,* and *fun*; those related to extrinsic *image* and *social interaction* tended to peak in the beginner or intermediate stages and decline through the advanced and expert stages (See Figures 2 through 7). Competition from the *image* factor was the lone exception; scores tended to increase linearly from beginner to expert for this item. This exception may be explained by the wording of the item, which specified competition not only with others, but also with the environment. While the former focuses on external comparisons with others, competition with the environment connotes a personal challenge to conquer whatever the setting "throws at them" as the opponent.

DISCUSSION & IMPLICATIONS

The results of this study provide further support for the Adventure Recreation Model (ARM) (Ewert, 1989). The ranking of individual motives confirms the definition of adventure recreation pursuits. While all recreation activities theoretically include goals of "fun" or personal satisfaction, it is essentially the "seeking of risk and uncertainty of outcome" (Ewert & Hollenhorst, 1989, p. 8) that differentiates adventure pursuits from other outdoor recreation activities. The factors that were identified in the factor analysis also aligned well with the variables identified in the ARM, including challenge, image, learning, and social interaction. Significantly, challenge was the strongest factor and contained six items related to personal challenge, novelty, fitness, excitement, risks, and skill development. Finally, as typically found in other recreation motive studies, adventure recreationists rate image-related motives lowest in importance. Societal pressures and norms often discourage individuals from openly admitting that seeking social recognition is a notable motive.

Consequently, if practitioners claim to be offering adventure recreation activities, it is imperative for them to understand what draws participants to these programs. First, *fun* is the number one motive and needs to be heavily emphasized when planning and implementing programs. Second, these results reveal that there are more ingredients to *challenge* than simply risk-taking. Feelings of achievement, novelty, fitness, excitement and stimulation, and skill development are also highly related to the theme of personal challenge. Structuring and facilitating adventure activities that produce *all* of these outcomes would tend to satisfy participants to the greatest degree. Third, comparisons with others should be avoided when conducting such programs, but emphasis on *personal* growth and development would be appropriate based on this ranking of motives.

Further investigation of the relationships between all six motive factors and respondents' level of development likewise support the ARM. Adventure, or "risk," recreationists do follow a similar pattern of development as other participants investigated in recreation specialization studies, but *challenge* is the factor that explains the most variance, with "to take risks" as the most discriminating single item. In general, motivations move from extrinsic at the beginner level, to intrinsic at the expert level. While means tend to increase linearly from beginners to experts for items related to the intrinsic motives, those related to extrinsic motives tend to peak in the beginner or intermediate stages and decline through the advanced and expert stages.

These results, which focused on general "adventure experiences," differed from the mo-

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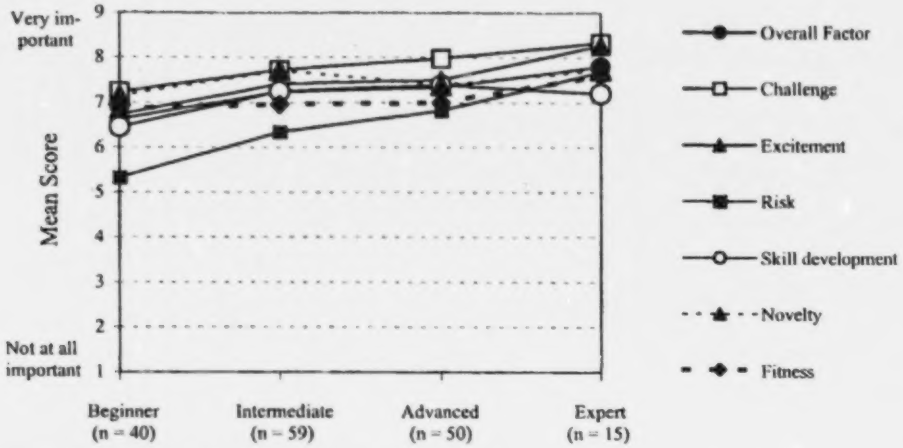

Figure 2. Challenge factor by level of development.

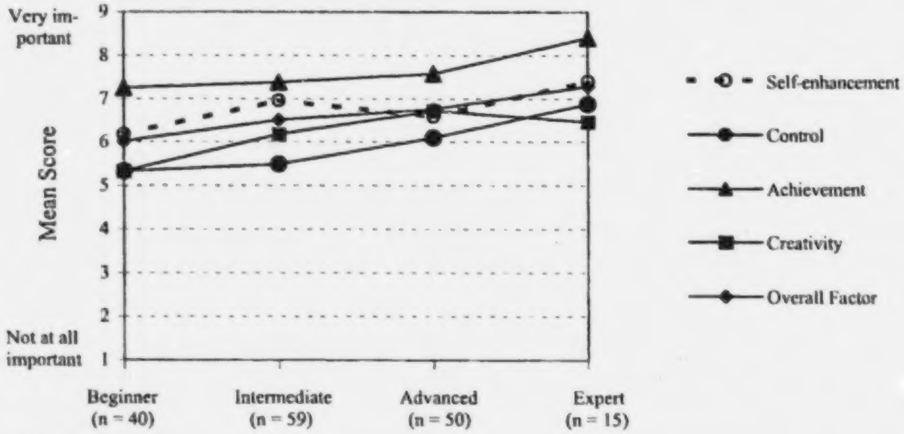

Figure 3. Self-efficacy factor by level of development.

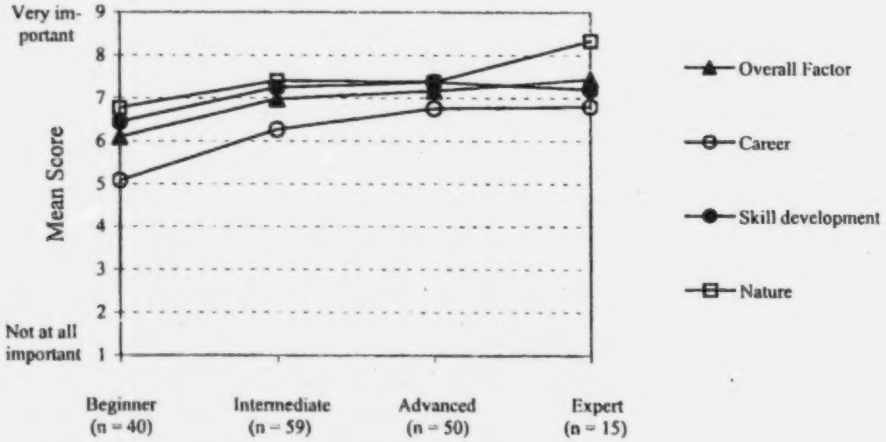

Figure 4. Learning factor by level of development.

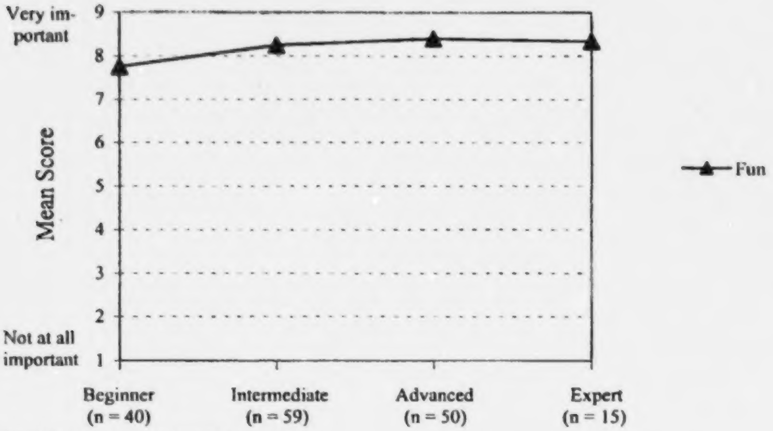

Figure 5. Fun factor by level of development.

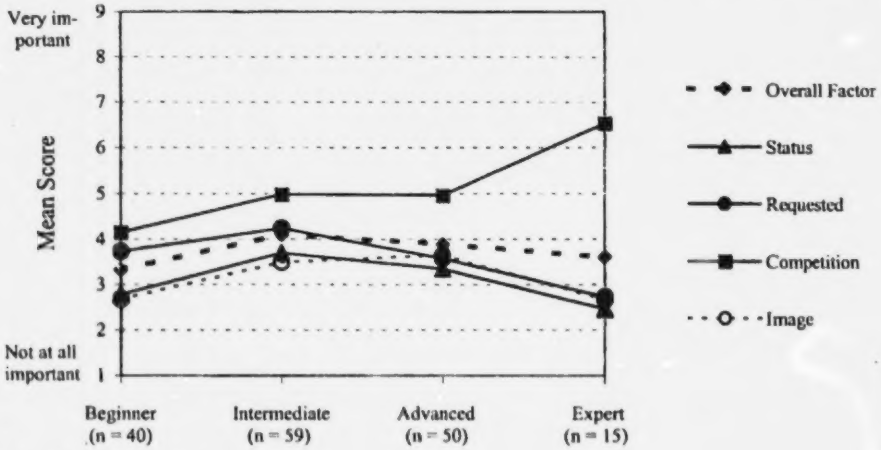

Figure 6. Image factor by level of development.

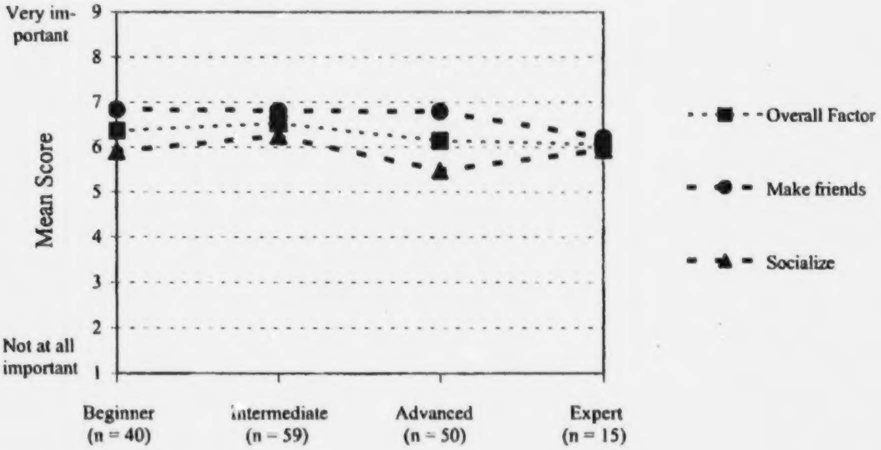

Figure 7. Social interaction factor by level of development.

tive patterns uncovered for the specific adventure recreation activity of SCUBA divers (Todd et al., in press). Unexpectedly, divers' extrinsic motives of stature and escape tended to increase, not decrease, with development, and the intrinsic motive of challenge actually decreased with development. The authors of that study suggest that diving is a unique type of leisure activity in terms of motivation. Beginners may initially be drawn to the activity to challenge themselves; however, once the skills and abilities are developed, divers seem to be motivated by the visible outcomes associated with (and stature of) the activity itself. One explanation may be that many divers in that study were members of the generation inspired by the television show *Sea Hunt*; when they started diving, there was a heavy emphasis on "trophy hunting" (i.e., collecting and displaying artifacts from their adventures) to lay a strong foundation for the importance of the stature factor.

If it is known how motives differ by level of development, facilitators of adventure recreation experiences (resource managers, tourism planners, adventure camp directors, programmers, instructors, club organizers, etc.) could use this information to assist planning for and promotion of various sites and activities. Outcomes that would most likely be satisfied could be highlighted, and participants' needs and experiences could be better facilitated.

Understanding what motivates beginners vs. experts (e.g., new campers vs. returning campers) would be critical to a program's success. This study supports the notion that certain extrinsic motivation strategies could be successfully implemented to initially encourage beginners' involvement. Such techniques could include setting the atmosphere by using appropriate environmental stimuli (artificial vs. natural); providing a planned progression or hierarchy of ranks or titles, each a little harder to achieve, presented in a way to mark involvement or progress so step-by-step growth is visible; initially offering prizes, rewards or status objects; finding extroverts to exert positive peer pressure; creating exciting challenges that build interest, add zest, and make participation unpredictable. If used sparingly and appropriately, these techniques could encourage initial participation and slowly be withdrawn as involvement became more intrinsically motivated with participant growth and development. Separation of developmental levels may therefore be beneficial.

Additionally, since trip leaders and instructors tend to fall toward the expert end of the developmental continuum while participants lean more toward the beginner end, it is crucial for staff to remind themselves (and each other) exactly whose trip it is they are leading. If inappropriate motives (i.e., the leaders' personal motives) are emphasized, not only will satisfaction be lower for beginner participants, making them more vulnerable to discontinuing or dropping out of the activity, but also the safety of all participants could be jeopardized. Participants need to be matched by motive, ability, and experience to the most appropriate level of challenge and right balance of fun; effective staff would constantly evaluate and re-evaluate all of these.

In the present study, the participants were required to participate in the adventure experience. Thus, it was assumed that the sample included a wide range of motivations and developmental levels. This may have helped to uncover more clearly the role of motivation in the ARM. Based on this, and other studies (e.g., Anderson et al., 2000), it is recommended that motivation remain in the ARM as a variable that can help explain development in the adventure recreation experience.

These results suggest that the ARM and its corresponding instrument be revisited. Instead of focusing on "level of engagement" as the central variable in the model, perhaps "risk" should take that role, especially since it seems to be the defining (and most discriminating) motive in adventure recreation pursuits. Since the challenge factor contained the risk item in the current study, further evidence was sought to confirm the link between this motivation and adventure recreation. The challenge factor was positively correlated to preferred level of risk (those with higher challenge scores were more likely to prefer higher levels of risk, $r = .38, p < .01$) as well as to the type of environment or setting used (those with higher challenge scores were more likely to recreate in natural, primitive, wilderness, "adventure-related" environments, $r = .21$, $p < .01$). Interestingly, the challenge motive factor was not related to the type of risk sought (social, such as fear of failing, vs. physical, such as fear or injury or death, $r = .09$, $p = .23$), even when level of development was taken into consideration. However, beginners preferred significantly lower levels of risk compared to the other three developmental levels, $F(3,160) = 6.36$, $p < .01$, and beginners tended to engage in adventure recreation in significantly less natural types of environments than experts, $F(3,160) = 3.24$, $p < .05$. Thus, certain risk-related conditions are not only correlated to the challenge motive, but they are also related to participants' level of development.

On a related note, instead of using "level of engagement" in the ARM, a more comprehensive "level of development" should be considered as a primary personal attribute, composed of items such as the currently used experience level, perceived skill, and frequency of participation, plus new related items (e.g., knowledge, commitment, equipment owned, and/or amateur/professionalism). This change would necessitate corresponding modifications to the ARM Instrument, including a categorical item for classification of respondents into one of five categories: beginner, intermediate, advanced, expert, and post-expert. The latter category points to a shortcoming of the current instrument: a post-expert cannot be identified, a stage that is commonly overlooked in terms of progression and retrogression in the development continuum. As shown by Todd and Graefe (2000, 2002), identifying beginners and post-experts can be critical; they are most vulnerable to experiencing perceived constraints and subsequently dropping out of an activity.

Thus, additional contributions to the literature could be made by linking level of development, perceived constraints, and discontinuance behavior to changes in motives. For instance, Ewert (1993) discovered that novice climbers who failed to reach the summit consistently reported lower importance scores for all motives. Longitudinal studies would also strengthen the claim that leisure motives change over time as individual development occurs. As an example, Todd and Graefe (2001) found that, after four years, quiltmakers who had progressed to a higher level of development were able to keep their motives at a consistent level, relying significantly less on the activity to help them work through grief or problems. However, quiltmakers who remained at the same level of development, or even retrogressed, seemed to have significantly less drive and control in their lives. Studies such as this one could contribute to a richer understanding of how motives and leisure behavior are related and change over time.

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DEVELOPING OUTDOOR LEADERS:
PAUL PETZOLDT'S PERSPECTIVE

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INTRODUCTION

Paul Petzoldt, an early pioneer in outdoor education, saw the need for trained outdoor leaders. Petzoldt spent his professional life educating outdoor leaders to lead safe, enjoyable outdoor adventures without harm to the environment (Bachert, 1987, Ringholz, 1997). Petzoldt, who died in 1999, left a legacy of organizations, books, students, and controversy that have helped shaped the outdoor leadership profession. After his death, boxes of papers and handwritten journals were given to the authors to use for research purposes.

Some of Petzoldt's unpublished ideas are presented in this paper. Key concepts and methods utilized by Petzoldt to train outdoor leaders were found in field journals, manuscripts, speeches and miscellaneous notes written by him over the last twenty years when he was active with the Wilderness Education Association (WEA). Found in the handwritten pages was Petzoldt's advice to those in the business of training outdoor leaders. The purpose of this paper is to compare these unpublished writings with three, well-known published works that describe Petzoldt's history, philosophy, and methods. The published writings are as follows: (a) *The Wilderness Handbook;* (b) *The New Wilderness Handbook;* and, (c) *The NOLS Experience.* These three publications, secondary written sources available to the general public, documented Petzoldt's philosophy. Comparing these publications with the more recent unpublished notes provides clarification and expansion of Petzoldt's thoughts during the final twenty years of his life, yet central ideas and philosophy remained unchanged.

METHODS

The authors' first task was to organize Petzoldt's unpublished works based on prominent ideas and concepts that characterized his philosophy. The following categories were used to sort his recent work: (a) judgment; (b) teaching methods; (c) leadership; (d) expedition behavior; (e) Wilderness Education Association history and certification; and (f) environmental ethics. These categories were chosen based on themes that consistently surfaced during the transcription of his handwritten notes into computer-generated files. In addition to Petzoldt's own words, the researchers took a postmodernist approach by integrating their own knowledge and experience to further interpret his works. Both authors served in the capacity of Petzoldt's students and later as his co-instructors.

The volume of information generated in this project cannot be adequately addressed here. Therefore, the authors chose to focus on the concept of judgment for this paper. Judgment formed the cornerstone of Petzoldt's philosophy on outdoor leadership (Bachert, 1987). Petzoldt believed that the key to quality outdoor leadership hinged on the leader's ability to exercise judgment. The challenge he embraced throughout his career was to develop a method to instill judgment in his students who aspired to be professional outdoor leaders.

While Petzoldt never alluded directly to the experiential learning cycle, he clearly believed that students learn best by doing, reflecting, and applying experience and knowledge as described by Kolb's (1984) experiential learning model. Those key points of reference were used by Petzoldt to develop the outdoor leader's judgment. Petzoldt used techniques discussed in this paper, such as 20-20 vision (hindsight) decisions, to apply his version of the experiential learning model. Judgment was the thread that tied Petzoldt's approach together during the final twenty years, just as it did when he founded NOLS (Bachert, 1987). Petzoldt explained that a specific process should be used to develop a student's judgment. From direct experience learning from and teaching with him, the authors learned that Petzoldt was adamant about teaching the "whys" as the way of developing a student's judgment. He believed that by challenging the student to address the "whys" of every decision, the student would have valuable information for future decisions. He also explained the barrier to developing judgment when the college-educated student insisted on learning the "right way". Petzoldt's trademark as a practitioner was his ability to stimulate the student's critical thinking skills, as opposed to promoting rote memorization of facts.

Two Views on Judgment

Petzoldt believed that judgment was the foundation of good outdoor leadership. His emphasis on this concept can be traced back to his work with the first Outward Bound School when he left tape recordings for the chief instructor who would succeed him (Bachert, 1987). Additionally, "judgment was a major objective of the first NOLS course in 1965" (Bachert, 1987, p. 69). Petzoldt never relinquished his stance on the importance of judgment in outdoor leadership training, and he incorporated the concept in every organization for which he worked. Petzoldt explained judgment this way in 1974: "Judgment is being able to relate one thing to all the other things you know. Judgment is being able to change plans when conditions suggest that necessity…" (Petzoldt, 1974, p. 25). Later, in 1979, Petzoldt defined judgment this way: "Judgment is the result of experiences that are the result of poor judgment" (Bachert, 1987, p. 70).

Over the years Petzoldt expanded his ideas on the concept of judgment. The notion of quality judgment was introduced to the public in the *New Wilderness Handbook* in 1984. The following expanded thoughts on quality judgment were discovered in his personal notes.

> …Judgment is the ability to use knowledge and experience to make decisions. If one makes decisions that work – we call that "Good Judgment." If one makes a decision that doesn't work – that does not accomplish a purpose – we call that "Bad Judgment." It is customary to explain outdoor accidents by saying: "they used bad judgment."
>
> The outdoor instructor and leader must make hundreds of decisions each day. Some are "small" decisions whose consequences are not too important. Other decisions could be dangerous and detrimental to the purpose of our education.
>
> Quality Judgment Decisions: The quality of one's decisions depends on one's judgment. So the leader, instructor must make "Quality Judgment Decisions" and teach the student how to make Quality Judgment Decisions.
>
> Since our purpose is to teach how to safely and enjoyably use the outdoors without harm to the environment and with consideration for the landowners, administrators, other users and the national welfare, then Quality Judgment Decisions are necessary to accomplish our purpose. Quality Judgment is our ability to make those decisions that work and accomplish our purpose. This ability does not develop automatically with knowledge and experience. Students must be taught how to make Quality Judgment Decisions from their knowledge and experience.
>
> How it is taught: The instructor must teach the knowledge and give the experience necessary for making a decision then teach how to make the decision then teach how to teach others the same procedure. (Petzoldt, n.d.)

Petzoldt went on to explain in his unpublished works what he believed was the appropriate teaching method to develop quality judgment. He believed that most traditional educators use the memorization method. The instructor explains to the class how to accomplish a task such as building a fire. After the explanation, students recall the lecture information and build a fire or complete an exam for evaluation purposes. Petzoldt continued that a second option often is used called the memorization/demonstration method. In this scenario, the instructor describes how to build a fire and demonstrates the technique. Evaluation is based on how closely the student mirrors the demonstration. Finally, Petzoldt described the quality judgment method. He used fire building to make his point as he did in *The New Wilderness Handbook*, but from the perspective of giving WEA instructors advice on the art of training outdoor leaders.

> ...Tell (explain) and demonstrate how to gather small, dry, burnable material, how to lay the fire, how to light the fire, etc. etc. etc. etc. etc. However, in addition to the above the instructor is explaining and demonstrating the reason for each action, each decision and how to those actions and decisions promote the accomplishment of the desired goals of the educational programs... Whenever possible the instructor should use the Quality Judgment Method, which allows the student to transfer judgment and reasons from situation to related situation – very necessary since no two situations in the field are ever the same. (Petzoldt, n.d.)

Petzoldt went far beyond the typical explanation/demonstration of how to "lay" a fire. He broached the concept of combustible temperature and exactly why natural materials ignite based on size and temperature. The difference of building a fire on a hot day versus a cold day was introduced along with many other important considerations. Petzoldt had a "knack" for breaking down a skill into a logical progression supported by the "whys" of every action and decision. Petzoldt would not simply explain the "whys." In his fire-building example, he modeled the Socratic method by questioning students, forcing them to analyze critically. Based on the researchers' personal experience, Petzoldt was not quick to supply an answer. The student was forced to think what was integral in developing quality judgment. Petzoldt's notion of teaching the "whys" was not new, only refined. Even in 1964, Petzoldt introduced the notion of explaining the "whys" as a way of teaching judgment. He explained it this way, "The simplest way, the way everybody can understand, even without experience, is the method of telling why you are teaching them any certain thing" (Bachert, 1987, p. 68). In his later years with WEA, Petzoldt spent his energy working directly with college students and professors. He was working with students schooled in the traditional education system. This experience reinforced and further refined his philosophy. Petzoldt gave this advice when training the college-educated participant:

> Action decisions then is the purpose [of] all outdoor leadership education in the field. It does the leader little good to be able to parrot what one has heard or read. Even exact explanations and analyzations are of little use. The only thing that counts in the wild outdoors in outdoor leadership is the quality of the decision made and its programmatic effect.... (Petzoldt, n.d.)

In reviewing Petzoldt's unpublished writings, it was evident to the authors that Petzoldt desperately wanted to leave advice for future instructors. This trait was not new. Petzoldt left advice for Outward Bound instructors in the form of audiotapes when he left the Colorado Outward Bound School (COBS). What changed was the context. Petzoldt's mission at the time of the reviewed writings focused on preparing WEA instructors to train college-educated wilderness leaders. His experience with WEA students, who were typically older or who had more education than Outward Bound or NOLS students, created the context for the words he left in the unpublished writings. The college student or college professor with experience had to be prepared in a specific way at trip start. Petzoldt gave the following advice for setting course tone and framing the experience to reduce conflict or participant dissatisfaction.

> Thus the instructor of outdoor leadership must teach for the purpose of developing practical decision making – not for the purpose of memorization or the storing of knowledge not related to decision making.
>
> The explanation of the difference in teaching will need to be explained and illustrated over and over and again and again before the college upper classman, [*sic*] the college graduate and even the college professor so ingrained in our educational system methods of teaching memorization for passing exams based upon speaking and writing memorized material.
>
> The instructor must be prepared for the frustration of the straight-A student who has learned the classroom method of making grades and suddenly finds that they do not have the ability to translate their new learning into decisions as well as their companions who they "beat" in the college grade system.
>
> The instructor of outdoor leadership will be tested dramatically in getting the students to accept the quality of actual task performance plus the ability to make practical decisions as the basis of evaluation and not the ability to regurgitate memorized material, which is a habit of years of classroom experience.
>
> Even with unusual teaching ability, judgment and understanding of human nature the instructor may find educated individuals who may refuse to make the transitions and rebel in rationalized criticism of the methods.
>
> Perhaps the most effective way of avoiding confrontation of outdoor leadership education based upon judgment decision making is to take the student through the thought process used by the instructor in making each decision explaining how and why each decision is made.
>
> However this in itself brings up another situation that must be carefully explained to avoid confrontation with some [students] schooled in the memorized test educational method. (Petzoldt, n.d.)

Petzoldt's frustration with the traditional education system was evident. The researchers' noted when working with Petzoldt that the students' "black and white" way of seeing the world deeply concerned him. The students' concrete view would significantly hinder the decision-making process. He was particularly hard on a student who would not look at a situation from several viewpoints. If a student only searched for "the right way" to operate as a leader, he or she would probably be badgered by Petzoldt.

Petzoldt articulated the process of training future leaders so that they would critically think based on each unique context encountered in the out of doors. An example found in the unpublished writing was the 20-20 (hindsight) vision metaphor, which forced leaders to think critically. Before participating in an activity, Petzoldt would have the students make judgment decisions concerning a forthcoming event. After the event, students compared judgments they made before the event with the judgments they would have made had they been given the gift of hindsight, a process he called 20-20 vision. This was the term he liked to use to explain the process of reflection in order to develop judgment. Petzoldt discussed the use of 20-20 vision and the fallacy of "black and white" thinking.

> Some or most students–even college graduates–will be looking for "answers." They will be expecting to be told the "right" way, the "wrong" way. The "best" way the "only" way. In such pigeonholes of "right," "wrong," "best," "only," they have stored much of their past learning. They have learned to be comfortable with putting "answers" in their notebooks – to believe as truths that are permanent and inflexible. It is a shock to learn that in making outdoor leadership decisions that there are action judgment decisions that are practical and have an acceptable action affect. Such decisions when analyzed in retrospect after action has taken place can always be improved by looking back with Monday morning quarterback 20-20 vision. So no decision can ever be right if we think of "right" as the "only" or "best" decision. All these words, "right," "wrong," "best," "only," "truth," "worst," connote a finality upon which further changes, modifications and improvement is unnecessary. Every judgment decision can be improved upon when looking back after the experience.
>
> Therefore our outdoor leadership judgment decisions are the ones that work to an acceptable degree–There are no absolutes if one uses "right" way as the "way" or truth to be final judgments then modification of decision is unnecessary.
>
> Before the student can learn to make programmatic decisions and continually modify those decisions to meet the changing situations of the outdoors, one must break the habit of thinking in absolutes. If we know the best way then there is no longer room for improvement. Thinking in "absolutes" and "truths" and making decisions in the field on absolutes is dangerous and impractical. No two situations are ever the same and no two judgments are ever the same.
>
> The student, even the most experienced and educated, must know from the beginning that your method of teaching or the method and ways you teach techniques is not the "best" way or the "only" way but only our way we have found to be practical, programmatic and generally make effective. We are not interested in non-evident best ways or non-existent "truths." We are interested in teaching how to make decisions that work and interested in making continuous improvement in the judgments necessary for that decision making process. (Petzoldt, n.d.)

A good example of breaking absolute habits and using 20-20 is in food rationing. Specific meals or menus are never planned in WEA. Rather, the right amount of food gets to the field to fulfill caloric, weight and cost specifications. Students either plan well and have enough food or run low. This is a typical Petzoldt dramatic field lesson!

Another concept tied to judgment deals with experience. It was obvious that Petzoldt felt strongly about the assumed benefits of experience as foundation for good leadership. Petzoldt made clear that the general public equated level of experience with the effectiveness of an outdoor leader (Petzoldt, 1974; 1984). Petzoldt maintained a longstanding belief that experience could also be dangerous. According to Petzoldt, it is a false belief that a person develops judgment from experience (Bachert, 1987). Petzoldt consistently shared the example of the cowboy mountain guide. These horse packers and hunting guides would wear their Stetsons, cowboy boots and Levi's in twenty below temperatures. They never changed their ways. They wore the same inappropriate clothing trip after trip no matter how miserable the experience. Petzoldt made clear that these cowboys were not learning from experience (Bachert, 1987). Petzoldt never wavered in this belief even in his later years. This is an important concept to grasp in understanding Petzoldt's argument that judgment can be taught on a standard outdoor leadership course. He stated it this way:

> ...One of the most harmful of these pre-trip concepts is that outdoor skills are synonymous with outdoor leadership. That one "learns by experience." That one is born with "good judgment" which cannot be taught. These ideas – of long standing will be vigorously defended by the student – the leader is advised not to make a frontal, direct effort to attack these ideas – Let them fade away as the student learns to make programmatic decisions based upon actual experience. (Petzoldt, n.d.)

The Expedition Format and Judgment

The themes of teaching judgment utilizing an expedition format carried through from Petzoldt's days with Outward Bound through his tenure with NOLS. He believed this approach was the essence of outdoor leadership development. The WEA curriculum and training process also reflected this philosophy (Drury & Bonney, 1992, Teeters & Lupton, 1997). Petzoldt shared his perspective on how the expedition format can be used to develop the outdoor leader:

> Within the time limits of the course the student must learn how to plan and execute small group expeditions in the wilderness. The absolute and basic knowledge and judgments must be taught. This means the course must be very selective in order to cover the basics in the time allowed.
>
> This is not a course of learning by memorization. It is a course of learning by judgment and doing. This means that the student must know why each subject or skill is being taught – its uses, its application, its relation of other teaching. In addition the student must apply the learning as soon as possible after explanation and demonstration under actual (not make believe) conditions in the field. The student must continue the application throughout the course at every opportunity.
>
> The above method will insure the students' ability to make judgements and decisions of quality in the future when he is in a position of leadership – or equally important, he will be able to spot serious errors when he is a member of a group and not the leader.
>
> Since it is unproductive to teach the student how to plan an expedition before the experience and judgments of execution has taken place, the teaching of planning and execution will be taught simultaneously in the field as opportunity is presented. Much of the teaching will be opportunity teaching. When a mistake is made, when a good

> judgement is made, when a situation arises that necessitates a decision, the instructor may cover a subject pertinent to the situation and related subjects. Such teaching will not conform to a daily outline or set course structure.
>
> What the instructor teaches on any given day will be partially dictated by the terrain, weather, fatigue and spirit of the group, and opportunity. Considering the above, the course outline consists of what will be taught in relation to techniques, skills, information, and judgments. (Petzoldt, n.d.)

It is important to note the evolution of the expedition format as the standard method for training outdoor leaders. When the first Outward Bound School was founded, a base camp programming format was used. Petzoldt had years of expedition experience and realized this would be an effective programming method (Bachert, 1987). Petzoldt and Tap Tapley implemented the expedition course format when they started NOLS. In Petzoldt's final years, he continued to see the expedition as the most effective teaching/learning format. Petzoldt's standard courses during his NOLS and WEA years ranged typically from 28 to 35 days in length. The researchers' remembered Petzoldt explaining that this length of time was needed to really develop the students' judgment using the extended expedition format. This is particularly noteworthy from a historical standpoint, as modern day wilderness courses decrease in length and new methodologies emerge.

Conclusion

This paper contains information obtained from Paul Petzoldt's collection of unpublished materials retrieved from his home after his death in 1999. These unpublished writings were compared to three published works, *The Wilderness Handbook*, *The New Wilderness Handbook*, and *The NOLS Experience*, which detail Petzoldt's philosophy and methods. An attempt was made to clarify and expand on Petzoldt's philosophy by sharing his perspective during the latter years of his life. Key ideas such as judgment, 20-20 vision, and use of wilderness expeditions were expanded upon and discussed.

Interestingly, much of Petzoldt's self-developed methods align with the experiential learning cycle. Students learned by doing a skill, thinking critically, and applying judgment decisions later in a course. The reflection and analysis process included the "whys" behind a decision and the 20-20 vision metaphor (hindsight). Application occurred throughout an expedition, as more activities were experienced over time through the use of judgment. In this way students were always increasing their abilities and were clear about limitations of leading others in the wild outdoors beyond the road head. Petzoldt, rough and graphic in his methods, innately understood how to educate others in the outdoors. He would kick pots into a fire if a student had a kitchen too close. The lesson had only to occur once for everyone to learn. A group discovered who was selfish and who was selfless when food was running low. Petzoldt only wanted selfless leaders in the field. As he aged his ideas and how to teach the concepts seemed to become clearer to him. He experimented with younger students, while continuing to focus on college students and professors. While only Petzoldt could teach in the way he did, many of his ideas, quotes, and even methods are still utilized in leadership training courses. Above all, he wanted self-aware, safe, resourceful and environmentally responsible leaders in the field. They, in his mind, would save lives and make traveling in the backcountry a fun and enjoyable experience. Keeping the ideas and records of people who have contributed to the development of a profession is important for the field, and these authors are pleased to share information from such a respected leader as Paul Petzoldt.

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OUTCOMES OF CAMPING: PERCEPTIONS FROM CAMPER FOCUS GROUPS

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INTRODUCTION

Many people go to camp. For some campers, camp is a chance to make new friends, learn new skills, and enjoy the outdoors. For others, the camping experience is not so positive. What happens to children at camp? What are the desired outcomes of a camp experience? How do staff and camp administrators facilitate the attainment of these outcomes? These questions are at the core of almost every camp program currently offered.

In this age of accountability, camp administrators are encouraged to provide outcome data to support their claims regarding the value of the camp experience as well as document that goals are met. Board members, grant committees, agencies, and even parents want to see proof that camp is a positive experience for campers. Funders, particularly in the not-for-profit sector, often mandate this documentation. Agencies such as the United Way want to see data that confirm their money is used to obtain goals that benefit the community. Board members as well as camp directors recognize the value of both quantitative and qualitative data to assess their programming objectives and realize the need to use a variety of techniques to gather and interpret outcome data.

The Recreation and Leisure Studies Department at the University of North Carolina, Chapel Hill (UNC-CH) and Morry's Camp are working together to develop an evaluation research plan that blends appropriate measurement tools with assessing desired outcomes. Several methodological techniques are in place to gather qualitative and quantitative longitudinal data from Morry's Camp. This paper, however, will focus on one set of qualitative results gathered from three exploratory focus groups conducted with campers. The purpose of this paper is to describe the match between the camp's objectives and the valued aspects of the camp experience as articulated by the campers. Our intent is to offer camps interested in validating outcomes an example of one method of qualitative data collection, analysis, and interpretation. The paper also relates the Morry's Camp findings to the professional literature surrounding youth from at-risk communities, resiliency, protective factors, and youth development.

BACKGROUND

The Children's Defense Fund (2000) projected that in the year 2001, one in two children would live in a single parent family at some point during their childhood; one in three children were classified as poor; and one in three children were a year or more behind in school. The number of children in violent homes ranged from 30 to 60 percent, and the number of children that were not living with their birth parents was on the rise. The numbers imply that these youth may be at high-risk and face an uncertain future.

A challenge exists when discussing the number of youth at-risk since varying definitions of the term "at-risk" are common. Bembry (1998) categorized youth and communities into three main categories of low-risk, at-risk, and high-risk. Low-risk requires effective maintenance programs to stop youth progression to the next levels. At-risk requires prevention programs to provide an alternative to incarceration, and high-risk requires intervention programs. Morry's Camp specifically deals with low-risk and at-risk youth by providing a maintenance and prevention program focused on the camp community and youth development.

Grayson (2001) realized the problem with multiple definitions and the characteristics of at-risk youth. He categorized youth at-risk according to the following characteristics: live in chronic poverty, go to a poor school, have poor school performance, are in a negative peer group, have poor social skills, use drugs or live with caregivers who use drugs, are a minority, and have a family situation characterized by stress. When children possess several of these characteristics they are more susceptible to sexual activity at an early age, drug abuse and alcoholism, or trouble with the law (Grayson, 2001).

Despite these facts, hope exists for these children. Not all youth from high-risk communities are destined to a life of drugs, crime, and failure. Researchers have shifted from a reactive approach of examining risks to a proactive approach of analyzing protective factors that create resilient youth. Lifton (1993) identified resilience as the human capacity of all individuals to transform and change, no matter what their risks. Resiliency is a pattern of successful adaptations following exposure to risk factors and stressful events (Public/Private Ventures, 1994).

Resiliency is a characteristic that can be developed. Witt & Crompton (1997) identified five key protective factors related to families, schools, and communities that lead to resiliency. The protective factors included supportive relationships with adults and mentors, student characteristics (such as self-esteem, motivation, and personal responsibility,) family involvement, community support, and academic success and training. Benard (1997) noted that teachers and mentors were the key to protective factors and developing resilience. Teachers can provide belonging, love, safety, respect, and meaning by developing caring relationships with the students, challenging the students with high expectations, and allowing student involvement and contribution. Resilience skills included the ability to form relationships (i.e., social competence), problem solve (i.e., metacognition), develop a sense of identity (i.e., autonomy), and plan and hope (i.e., sense of purpose and future) (Benard, 1997). Camp is an environment to foster these resilience skills and provide positive youth development.

Youth development at the most basic level has been described in the following way (National Youth Development Information Center, 1998):

> A process which prepares young people to meet the challenges of adolescence and adulthood through a coordinated, progressive series of activities and experiences which help them to become socially, morally, emotionally, physically, and cognitively competent. Positive youth development addresses the broader developmental needs of youth, in contrast to deficit-based models that focus solely on youth problems.

Youth development includes not only the process of development but also the outcomes of development as well as the programs and organizations that focus on the non-academic outcomes offered in non-school hours.

Youth development experts have suggested a need to push beyond the current thinking about the exact outcomes, inputs, settings, strategies and actors needed to help young people address problems, build skills, and pursue opportunities for learning, work, and community contribution (Bembry, 1998; Pittman & Wright, 1991; Pittman, Irby, Tolman, Yohalem, & Ferber, 2001). Researchers at The Forum for Youth Investment (Pittman et al., 2001) suggested several ways to broaden the agenda in youth development. For example, outcomes need to be broadened beyond school achievement and problem avoidance to include more intentionality of the positive expectations we have for youth, rather than just what we do not want them to do. A need exists to expand the inputs beyond a traditional approach of providing services. Young people need caring adults to help guide them and opportunities to learn and give back to their communities. These relationships and opportunities need to go beyond the quick "fix-it" services common in many youth development programs. Goals related to settings and times need to extend beyond school so resources and opportunities are available where they live, play, and learn with access to these supports at critical times other than traditional school hours. Perhaps the greatest need is for young folks to be more than recipients of services. They need to have responsible roles in which to develop their skills and find motivation to address challenges they encounter.

Research that brings together the concepts of resiliency, youth development and the camp program gained momentum during the past ten years. Indications from the field are that camping professionals are transitioning from informal evaluations to formal outcome processes. More camps seemed focused on personal and interpersonal growth in campers related to goal setting, social competence, metacognition, and autonomy. Youth organizations such as 4-H, Girl Scouts, Boy Scouts, YMCA, Campfire USA, and the American Camping Association have long recognized the potential that exists to facilitate youth development and build resiliency through organized camping. These organizations recently added camper outcome measures in addition to their traditional basic site, staff, and program evaluations (Dworken, 2001). For example, 4-H camps in Connecticut sent open-ended surveys to campers and their parents focused on the influence of camp on the camper. These survey results were compared to the Search Institute's forty developmental assets necessary for healthy youth to document the areas where camps play a positive role in the development of their campers (Dworken, 2001; Search Institute, n.d.). These Connecticut camps were objective driven and proactive in dealing with campers' basic needs, their developmental processes, and fostering resiliency. The formal outcome measurement process served as a tool to ensure that their objectives were met.

The Morry's Camp Experience

For 30 years, Morry Stein was the owner and director of Camp Echo Lake. He was also a dedicated leader within the American Camping Association. Morry recognized the long-term impact camping made on the lives of upper-middle class youngsters and wanted to extend this opportunity to children of all socioeconomic backgrounds. He saw a need to help children be resilient to the challenges of growing up in high-risk communities and dreamed of a program that could lead these children toward positive youth development. Unfortunately, he died in a plane crash on October 31, 1994 and did not see his wish fulfilled. His dream, however, did not die, and dedicated friends and family members launched Morry's Camp in 1995. Morry's beliefs in the positive contribution to youth development is seen in the philosophy of Morry's Camp and the specific goals that center on fostering resiliency and positive youth development as evidenced by camper outcomes.

Morry's Camp conducts a variety of fund-raising events and gathers support from an active Board to provide a camping experience that is free of charge to selected girls and boys from diverse ethnic backgrounds from at-risk communities in the New York City area. Potential campers must meet specific requirements and undergo a competitive application process. The specific requirements necessitate that children do not have any other means of attending a camp program that they are performing up to their abilities in school, have parental /guardian support, and are not in trouble with law enforcement.

Morry's Camp operates a "4x4 program." This program entails coming to camp for four weeks with a guaranteed reservation for four years as long as the campers continue to meet the original requirements. Children go to camp for their first time as rising 5th graders and "graduate" the summer before 8th grade. The camp is composed of 2 four-week sessions that have approximately 100 campers in each session. Morry's Camp mimics an educational structure in that 5th graders are "freshman," 6th graders are "sophomores," and so on. The post-graduate (post-grad) program is the most recent program developed for "graduated" teenagers from the 4x4 program. The focus of the post-grad program is on developing leadership skills and finding jobs and learning opportunities for the post-grads within their communities. Education is the cornerstone of all Morry's Camp activities. The staff is focused on the camp's year-round objectives and plan programs accordingly. Campers enjoy traditional activities as well as all-camp read and education clubs that build on academic objectives from the campers' school curricula.

A unique aspect of Morry's Camp is the year round component. Staff travel to campers' schools to hold monthly programs with the campers. These programs include goal setting and life skills trainings. The staff members discuss the older campers' specific career goals and help them find internship opportunities within their communities. One adolescent camper was interested in drama and fine arts, so the staff collaborated with a local group and got some interested Morry's campers involved with a local play. Campers are required to attend 80 percent of the monthly programs. In reality, they have approximately a 90 percent attendance rate at these meetings. The year round component and summer programs at Morry's Camp are specifically designed to address the camp's objectives to develop positive core values, increase social skills, enhance self-esteem, and develop a sense of personal responsibility. These goals were the initial focus of Morry's Camp, because they paralleled the findings discussed in the youth development research and corresponded to the personal beliefs of Morry and the camp administration.

The Camp staff and Board have consistently evaluated their programs to assure objectives were met, but recently have made a commitment to move beyond program-specific evaluations. The Camp has joined with a research team from the University of North Carolina-Chapel Hill to establish a longitudinal research study that will generate research information on aspects of youth development within a year-round program based on the camping experience. The first step was to document through a formal, systematic method that a match existed between the Camp's objectives and the valued aspects of the camp experience as articulated by the campers and, secondly, to situate these findings within the youth development literature in a way that could lead to the emergence of grounded theory.

METHODOLOGY

In February of 2001, the research team conducted three exploratory focus groups with campers. Krueger (1988) defined a focus group as people who possess certain characteristics and who provide qualitative data through a focused discussion. Focus groups are not the typical means of evaluation within the camping profession. These qualitative methods, however, can provide a rich data set and lead to a fuller understanding of people's perceptions and experiences (Henderson, 1991). Focus group interviews assess participant perspectives (Minnis, Holsman, Grice, & Payton, 1997; Morgan, 1988), provide an opportunity for in-depth explanations and detail, and allow for modification as unanticipated topics arise (Stewart & Shamdasani, 1990).

The UNC research team conducted the focus groups at campers' schools. Morry's Camp administrators helped obtain parental consent from campers who attended the after-school monthly meeting scheduled for February 2001. Researchers set up three focus groups: two groups were composed of campers from the 4X4 program and one group was taken from the post-graduate (post-grad) program. The campers in the 4X4 groups consisted of "sophomores and juniors" who in reality were 6th and 7th graders. The one-hour focus groups were composed of twelve 4x4 campers from varied ethnic backgrounds including African-American, Latino/Latina, and European-American. The post-grad group consisted of three teenage females of African-American and Latina decent.

An interview guide was designed to elicit campers' perceptions of their camping experiences through a variety of open-ended questions. The questions were not focused specifically on the Camp's objectives but were broad and designed to follow-up on information from previous written evaluations. Focus group questions included questions such as the following:

- What is it about Morry's Camp that makes you want to come back?
- How do you think going to Morry's Camp makes you different from kids around you who don't go to Morry's Camp?
- Do you think Morry's Camp has made a difference for you at school?

- Why do you think going to Morry's Camp would be a good thing for your best friend?

The three one-hour focus groups were audio-recorded and transcribed verbatim. The Nvivo analysis software for qualitative data analysis was used to manage the text data and emergent coding schemes. The research team used constant comparison techniques for analyses of the focus group data. This technique required that each transcript be read several times for familiarity, and then each research team member began to develop initial coding schemes. The team compared coding perceptions and negotiated to agreement on the few coding differences that had surfaced. The coded transcriptions were read one more time for verification of the codes into twenty emergent themes. Each theme was then analyzed in relation to the Camp's four objectives: positive core values, increased social skills, sense of personal responsibility, and enhanced self-esteem. These comparisons by the research team resulted in seventeen themes that corresponded with the four goals of Morry's Camp. The three themes that did not directly relate to the camp's objectives were the positive influence of the staff, the differences between camp life and city life, and the overall "fun" atmosphere of camp. The implications of these three themes go somewhat beyond the scope of this paper with its focus on the identified camp objectives but were interesting to note.

FINDINGS

The qualitative data collected from the focus groups revealed perceptions and memories about the Morry's Camp experience of these children. One young male camper noted:

> Every time you are coming home from camp you cry and still you have the memories. You have good memories, you have bad memories but that's the good thing about it. Every time you come into Morry's Camp you have memories to remember.

These memories highlighted several key aspects associated with the Camp's stated objectives (i.e., positive core values, increased social skills, enhanced self-esteem, and a sense of personal responsibility) that are detailed in the following sections.

Core Values

Campers' comments that emphasized *respect, leadership, goal setting, and appreciation of the environment* were linked back to the Camp's goal of "building positive core values." A young male camper mentioned that the counselors "Show you to respect yourself and others." A teenage camper mentioned leadership and goal setting:

> When it comes to these goals, like making our leadership better and becoming more tolerant of people, I think they become better because in camp you get to be more open with people. ... You live with somebody for almost a whole month, so in a lot of ways, I think they've taught us a lot when it comes to these goals.

Several of the campers spoke of their appreciation for the environment and enjoyed the beauty and quietness of camp. A young girl was excited that she saw birds that were not pigeons. A camper mentioned that, "what makes me want to come back to Morry's Camp is just getting away from all of these surroundings [city] and just going to a wildlife area." All of these aspects were related to the development of positive values central to the youth.

Social Skills

Another stated objective of the Camp was "increasing social skills." Campers highlighted *teamwork, friendships, appreciating differences, tolerance, manners, and listening* that fit with this objective. A male camper learned about teamwork and friendship and stated, "At camp it's not only you, you have to help each other."

The campers also developed friendships with international counselors, staff from different parts of the United States, and with campers from around the New York City area. A teen camper noted that, "in camp we get to interact with different people, where in school it's mostly just like us." Another camper spoke about how Morry's Camp had helped enhance her leadership skills as well as her tolerance for others. She said, "I'm like more open to other people's ideas, ...maybe when I don't like when people say things, I understand that maybe they have their reasons why they say that." Several of the boys and girls mentioned that they had learned manners at camp. As stated by one camper, "like when you are sitting at the table, they tell you to say 'please.' And when you're passing things, they tell you to say 'thank you.'"

The campers expressed that staff also stressed the importance of developing listening skills. Campers indicated they learned this skill through circle sharing activities. A camper reiterated learned social skills when he mentioned, "There's less people than in the city and mostly everybody is your friend, so when you see someone you can stop and talk to them." All of these quotes illustrate the children's perceptions about camp experiences that have contributed to improved social skills.

Self-esteem

The campers were proud to boast about their *achievements, self-confidence, and independence*, which subscribed to the camp's goal of enhancing self-esteem. For example, the campers felt achievement in creating their own songs and music that was recorded as Morry's Camp CDs. They also learned new skills during their education club time that they said enhanced their self-esteem. One girl was especially appreciative for the opportunity to learn to swim:

> Morry's Camp gives me self-confidence, because like the first year when I was a freshman, we went swimming and we got swimming lessons. So I was scared to be here because I don't know how to swim. Then when they started teaching me, I started to swim and then from there on, I knew how to swim, and I wasn't afraid of the water anymore.

Another girl was excited about her independence; "...you think you're a grown-up because you do things for yourself." As illustrated by these examples, the children expressed multiple ways that their self-esteem had been enhanced at camp.

Personal Responsibility

The last camp objective examined in relation to the emergent themes from the focus groups was related to developing a sense of personal responsibility. The campers frequently mentioned *accountability, problem solving, service/chores, and patience* during these group interviews. A female camper boasted that she had learned how to resolve her problems and be patient with others:

> Sometimes when you have to use the bathroom, there are four toilets and a lot of people who have to use them, so you have to be patient to use them. You also have to wait for the showers.

A camper also mentioned the Sunday community cleanup:

> On Sundays you do community service. You get a job and you have to clean sometimes the medical area or the dining hall. It's only fair that if we mess it up we should clean it.

One camper described that her parents saw a change in her responsibility level when she returned home. She mentioned that her parents were hesitant to send her back to camp, because they realized how sad she was to come home from camp. Her parents decided to let her return because:

> They noticed that like when it came to responsibility, I really am better about it. I started cleaning more around the house, because in camp they gave us chores. I started clearing off my plate, throwing my dirty laundry in the hamper where it belongs, and you know, things like that and now they're like 'OK go'.

The analysis of themes that emerged from the focus groups clearly indicated that the goals of the camp were met as articulated by the children. This analysis process not only documented the desired outcomes but also provided a richness to the data that would have been missed in more traditional approaches. Through the children's own words, the outcomes were expressed as the lived reality and valued memories of the camping experience.

DISCUSSION

The findings from the focus groups indicated that the campers articulated outcomes that fit within the goals of the camp. The verification of these outcomes was also conceptually important when situated within the youth development literature. The vision and objectives of Morry's Camp appeared to relate to multiple aspects of a broadened agenda for youth development (Pittman et al, 2001), but especially to Bembry's (1998) "Re-creation" model of youth development and programming. Bembry advocated for programmers to meet the basic needs of the child and develop programs to build competencies and core principles. He stressed the importance of the environmental factors of communities, families, individuals/peers, and schools. He noted that practitioners and researchers must move from the risk factor focus to a proactive youth development approach. Bembry's "re-creation" model redefined the role of recreation as a link between youth and community. The model illustrates how social work and recreation principles provide risk-reduction and resiliency as well as enhance the mental and physical well being of youth and communities. Morry's Camp follows this model by examining the campers' protective factors.

Bembry's model highlighted the key principles and potential recreation programs to reach youth. The model focused on relationships among key principles, core competencies, recreation program areas, and ultimate desired outcomes. The five key principles of the model included trust, respect, integrity, consistency, and self-esteem. Bembry suggested these principles increased core competencies, connected youth and communities, and supported youth and families. The core competencies were social, personal, citizenship, belonging, and knowledge. Bembry believed it was essential for recreation professionals to display and instill these principles and competencies within youth. Sports and athletics, culture and diversity, and education and lifelong learning were the three main program areas of the "re-creation" model. The desired outcomes centered on healthy beliefs, opportunities, recognition, bonding, and skill development.

Morry's Camp operates on a prevention and maintenance level according to the "re-creation" model and parallels many of the aspects described by Bembry. The key objectives of Morry's Camp are to instill positive core values, increase social skills, develop a sense of personal responsibility, and enhance self-esteem. The emergent themes became the underlying objectives and desired outcomes. Morry's Camp uses the individual, peers, staff, and camp community structure as tools to instill the key objectives. Circle activities, traditional camp activities, meals, and service projects were just a few of the programs to target these objectives. For example, campers learned positive core values from circle-sharing activities, increased their social skills by learning manners at mealtime, and gained a greater sense of personal responsibility through service projects. Self-esteem was enhanced as the campers learned new skills from camp activities. The campers' examples highlighted specific camp programs and attributes that linked the positive activities and sphere of influence to the key objectives and outcomes. This linkage parallels that found in Bembry's "re-creation" model and adds a new perspective on the ways that a camping experience with a year-round component may add to the youth development literature (see Figure 1).

Several recommendations have evolved from the analysis and interpretation of the campers' focus group data. A methodological recommendation is for camping professionals to consider focus groups as a means of documenting attainment of a camp's goals. This technique expands beyond the scope of traditional surveys and provides a richness and depth that is often missing in quantitative data. Researchers and camping

FIGURE 1
Modified "Re-creation" model (Bembry, 1998) based on camp outcomes

Objectives	Positive Core Values	Increased Social Skills	Greater sense of personal responsibility	Enhanced Self-esteem
Themes	Respect Leadership Goals Environment	Teamwork Friendship Differences Tolerance Manners Listening	Accountability Problem Solving Service Patience	Achievement Independence Self-confidence
Sphere of Influence	Staff	Peer	Camp community	Individual
Positive Activities	Circle sharing	Meals	Service activities	Camp Activities

professionals should collaborate and continue to use techniques such as focus groups, journal writing, and observations that generate qualitative data as well as more traditional survey methods to measure outcomes.

A second recommendation relates to the development of youth development theory and the role of camp research in that process. Camps should be encouraged to situate their evaluations of camper outcomes within the youth development literature. Many camps have outcomes that could inform theories of youth development. As seen in this study of Morry's Camp, the impact of the experience goes beyond the bounds of the camp property. Findings such as the ones described in this study of Morry's Camp speak directly to the critical need articulated by Pittman et al. (2001) to broaden the outcomes, services and opportunities, timing, and settings for positive youth development.

This exploratory study examined focus group data regarding campers' experiences related to the stated objectives of the camp program. Several conclusions were based upon the findings from this study. First, Morry's Camp seems to be meeting its objectives when viewed from the perspectives held by the campers. Campers articulated the values and meaning of camp through their perceptions. These values were aligned with the camp's four main objectives focusing on positive core values, increased social skills, enhanced self-esteem, and a sense of personal responsibility. The objectives became a conscious component to the camp program and a source of focused attention with campers. The objectives were not left to chance to occur but rather were programmed for and discussed with the campers. This intentional objective-driven programming relates to Marsh's meta-analysis (1999) that explored the value of camp. Marsh summarized:

> Camps wishing to expand their program philosophy to include enhancement of self constructs should establish an environment that reinforces the self through positive interactions with others, provides opportunities to achieve success and an environment that provides for a sense of involvement in the camper's experience.

This exploratory study was the first step in a longitudinal study to explore the impact of the camping experience on children from communities at-risk. This first phase was focused on exploring the relationship between memorable and valued experiences at camp and the stated objectives of Morry's Camp. The findings indicated the high degree with which the camp program seemed to reinforce the objectives since the campers expressed in their own words aspects of camp that fit the four objectives of the camp. The long-term values of camping, however, require further exploration and documentation, particularly as to the impact of the experience across the life course. Maybe this thought from a young camper sums it up best:

> Sometimes when you're a grown-up and just came back from work and you're all tired, you can use the Morry's Camp memories to make your smile come back.

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THE RELATIONSHIP BETWEEN PROGRAM COMPONENTS AND OUTCOMES: PARTICIPANTS' PERCEPTIONS OF AN OUTDOOR ADVENTURE STUDENT ORIENTATION

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The purpose of this study was to assess participants' perceptions of program components and outcomes of a first-year college student outdoor adventure orientation (OAO) program. Qualitative, semi-structured post-trip interviews were conducted during the spring semester with 11 OAO participants.

We adopted an outcome framework for the study and used the philosophical literature on outdoor adventure education, Priest's (1999) hypotheses of the adventure experience, and Gager's (1986) model of experiential learning to identify program components (e.g., challenge) deemed to be integral program mechanisms. We then assessed the participants' description of their experience in a program component with their perceptions of program benefits. Specifically, we investigated perceived benefits, perceived challenge, group integration, leader behavior, self-knowledge, and the transfer of the experience to the first-year college experience. In addition, respondents were also asked to describe their decision to participate.

The benefits reported by the respondents reflected meeting new people, being in the outdoors, the challenge of the experience, self-understanding, and learning about teamwork and cooperation. The backpacking portion of the program was viewed as the essence of the experience. Participants reported rather ambiguous feelings about the service-learning project, as it seemed disconnected from the rest of the experience. Structured post-trip exercises on the topic of the transition to college were viewed as the most negative. While the respondents expressed apprehension about meeting others it was also a primary reason for participating. Meeting others and the physical demands of backpacking were the challenging elements of the experience. The cooperative living situation was recognized as a demanding reality context, and the leaders' efforts to empower participant decision-making, work in small groups to accomplish tasks, and work together as a team were identified as important program features. The leaders role in the challenge-risk-trust dynamic was also recognized. Participation was motivated by the opportunity to meet people in a unique setting and participants felt this gave them practice in what they were going to have to do. There was a general sense of accomplishment and some sense of recognition that the experience could be applied in other aspects of life, but not necessarily academics. The most direct transferable outcome appeared to be the feeling of social efficacy during the first few days of the semester.

This study illustrated that for some program components, the participants' description of their experience in a particular part of the program matched what program planners would expect. However, some of the connections that theorists make between experience and outcome were not evident.

TEN YEARS OF CHALLENGE COURSE RESEARCH: A REVIEW OF AFFECTIVE OUTCOME STUDIES

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Over the past 30 years, challenge/ropes courses have spread across the country and are now focused toward a variety of populations, including adolescents, college students, and corporate employees. Despite their success and growing popularity as an effective training tool, challenge/ropes courses have earned little credibility through academic research. Although a significant amount of research has been completed, questions continue to arise regarding the efficacy of challenge/ropes experiences for corporate team development and the educational enhancement for adolescent and college students. The purpose of this study was to assimilate and synthesize challenge/ropes course research during the 1990s that studied affective outcomes with non-therapeutic populations.

The electronic databases of ERIC, Current Contents, PsycInfo, and Digital Dissertations were searched using keywords such as ropes course, challenge course, adventure education, adventure training, experiential education, experiential training, experience-based education, and experience-based training. Eighty-seven studies and documents were located using these search terms. For inclusion in the review, a study had to meet all of the following criteria: article published or dissertation completed during the 1990s; challenge/ropes course experience of primary importance to the study; at least one dependent variable relative to challenge/ropes course affective outcome, i.e. self-esteem, self-efficacy, team development, etc.; non-therapeutic setting and population; and adequate data reported for effect size computation. Authors who did not report adequate data for effect size computation were contacted and asked to provide the necessary data. Nineteen studies met the inclusion criteria. However, four studies were identified as special cases due to their focus on specific facilitation components, i.e. debriefing techniques, indoor versus outdoor venues, and program sequencing. The remaining 15 studies were used for effect size (ES) comparisons. Cohens d ($d = M_2 - M_1 \ / \ sd_{pooled}$) was used to compute effect sizes whenever possible.

Of the 15 studies, 10 studies found the challenge course experience resulted in statistically significant positive changes in one or more of the affective dependent variables, while five studies found the challenge course to elicit no significant change in affect. The studies with significant findings had a mean ES=.75, sd=.51. The only dependent variables tested by more than one study were team development, self-concept, and self-esteem. Team development included five studies with a mean ES=.58, sd=.53. Self-concept had two studies with a mean ES=.23, sd=.02. Self-esteem also had two studies with a mean ES=.16, sd=.12. Six other affective variables were investigated by single studies. These variables and their effect sizes were as follows: physical self-efficacy, ES=1.81; classroom environment, ES=.86; group cohesion, ES=.76; moral reasoning, ES=.45; hope, ES=.43; and openness and support, ES=.27. When studies were grouped by duration of the challenge/ropes experience, effect sizes were larger as duration increased. Although the categorical groupings showed a trend toward higher effect sizes with longer duration, the actual statistical correlation between duration and effect size was r=.28. Of the five investigations identified as special focus studies, two examined the influence of sequencing on group environment and cohesion. One of these studies reported statistical significance (ES=1.99) and the other found no significant difference (ES=.08). A single study focused on the influence of debriefing techniques on group environment and found a statistically significant difference between techniques (ES=.34). Another single study investigated the influence of an indoor versus an outdoor environment on team development and did not find a statistically significant difference (ES=.10). Such inquiries into specific challenge course components are an important direction for continued investigation.

Research during the past ten years showed that challenge course experiences were most effective when used to develop group cohesion and teamwork, and when the duration of the experience was 14 hours or longer.

AN EXAMINATION OF THE IMPACT OF EXPERIENTIAL EDUCATION MODELS USED IN CROSS-CULTURAL PROGRAMS ON THE MORAL REASONING OF HIGH SCHOOL STUDENTS

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Many programs have been developed over the years to evaluate the effectiveness of developing moral reasoning and behavior in students (Rose, 1992). Dilemma discussions, role-taking activities, Just Community, service-learning programs, and reflective processing are all techniques that have evidenced moral development in their participants (Rest, et.al, 1999). The study of moral development and the conditions enhancing it have recently come to include an examination of outdoor and experiential models of education, as previous research done indicates that a fusion between "significant role-taking experiences and active reflection" positively stimulates moral development (Conrad & Hedin, 1981). The purpose of this study was to ascertain if a student's moral reasoning may be enhanced during cross-cultural immersion programs, which intentionally incorporate experiential learning (i.e., the cycle of experience reflection transfer new knowledge). Using the University of Minnesota's Center for the Study of Ethical Development Defining Issues Test – 2 (DIT-2) as a quantitative instrument, the study looked at the indicated differences in the moral reasoning of 50 students between the ages of 14 and 18 before and after their experiences on Global Routes and Interlocken travel programs. Both organizations operated four- to six-week international trips with leaders focusing on facilitating educative growth in their participants through their program's structure. Programs occurred in Western Europe, Costa Rica, St. Lucia, Ecuador, Kenya, and Tanzania. Though Garvey (1991) experienced a ceiling effect with his students' DIT pre-tests, during his doctoral examination of Semester At Sea undergraduate students' moral development, his qualitative findings (drawn from interviews and student journals) seem to indicate an increase in moral reasoning. The current study aimed at focusing on cross-cultural immersion and moral development in programs that are explicitly designed toward experiential learning and reflection. Global Routes and Interlocken share a mission statement firmly focused on experiential education, and their summer program demographics are younger students who are not all necessarily self-selecting, making this study unique from previous research in moral development with similar programs, such as Semester At Sea. This study intended to contribute research detailing the program efficacy of Interlocken and Global Routes by demonstrating that their trips serve as interventions in increasing students' moral reasoning. The DIT-2 was administered during the Summer of 2002. Results show that participants' mean pre-test scores were higher than the norm P% score for senior high school students taking the DIT-1, provided as a comparison, and there was a statistically significant increase in students' DIT-2 moral reasoning scores from pre-test to post-test. Specific increases or decreases for each program are detailed further in the study, as well as correlations for gender, previous international experience, spirituality, political affiliation, and motivation.

This study is currently being supplemented with qualitative interviews, focusing on the program that had a complete data set (i.e., all participants completed both a pre- and post-test) and whose participants demonstrated the most significant increase in scores. The interviews will help provide a broader understanding of what components (i.e., group dynamic, international exposure, facilitation techniques, personal growth, etc.) may have contributed to the indicated increases in moral reasoning scores.

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DEVELOPMENT AND VALIDATION OF AN OUTDOOR LEADER EXPERIENCE USE HISTORY INSTRUMENT

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Expertise gained in naturalistic settings has been shown to affect decision-making in a variety of ways (Zsambok & Klein, 1997; Fox, 1996; Simon & Chase, 1973). Outdoor leader decision-making is often cited as one of the most important competencies that professionals in the field possess (Priest & Gass, 1997; Cain & McAvoy, 1990; Petzoldt, 1984). This abstract describes the conceptualization, development, and validation of an instrument designed to measure the personal and professional experience levels of outdoor leaders—the Outdoor Leader Experience Use History (OLEUH). The OLEUH represents one method to generate empirical measurement in what has historically been an intuitive arena.

A Delphi process was utilized in the development of the OLEUH. Experience factors were grouped into two broad areas of personal and professional experience. Personal experience factors included level of education achieved, major area of study, estimated weeks of outdoor experience, average trip length, environments encountered, seasons in which experience was gained and frequency of participation by activity. Professional factors include an index of profession employment (compiled from trip length and number of trips), environments encountered (activity), seasons worked, weeks of experience by population, weeks of leadership by level (assistant instructor, instructor, etc.), certifications, and courses or trainings attended. A sample was obtained in order to generate reliability and validity data for the OLEUH from outdoor leaders at a university outdoor education center and an Outward Bound school (N = 121) during their respective staff trainings. Ninety-six (56 male and 40 female with a mean age of 28.66) usable forms were obtained.

Internal consistency reliability for the OLEUH was estimated by computing Cronbach's Alpha (α) for the eight subscales resulting in an overall reliability coefficient of .71. This coefficient meets the accepted standard for reliability coefficients of .70 (Nunnally, 1978). In order to estimate construct validity, a factor analysis was conducted using principal axis factoring with direct oblimin rotation for these data. A two-factor model was returned explaining 44.62 percent of the variance in this data set.

T-scores were represented in radar graphs by grouped means in order to estimate interaction and to provide a visual representation. The T-scores for each subscale were transformed into grid coordinates and the area of each polygon was calculated. The resulting scores have acceptable range (Range = 781, Min. = 366, Max. = 1147). A one-way ANOVA was conducted to test differences in grouped means resulting in significant differences ($p<.001$) for the group as a whole. A Scheffe test of post hoc comparisons found statistical significance ($p<.01$) between all seven groups (Table 3). Thus this scoring scheme demonstrates good discriminatory ability between individuals for the purposes of comparison.

Potential uses for the OLEUH include the assessment of staff development needs, and use as a research variable for investigating the effect of experience on leader performance, decision-making, and program and participant outcomes. The OLEUH also generates a graphic representation of an individual's experience patterns.

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GRAPPLING WITH THE THEORETICAL AND MEASUREMENT ISSUES INVOLVED IN ASSESSING THE IMPACT OF A COMBINED ADVENTURE/ SOCIAL-COGNITIVE PREVENTION PROGRAM ON VIOLENT BEHAVIOR

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About ten years ago, two simultaneous "calls for future research" intrigued me greatly because of their immense potential for promoting positive adolescent development. The first was the Healthy People 2000 document, published by the United States federal government, which called for the development of effective violence prevention programs. The second was a theme that ran through outdoor adventure research literature calling for the examination of adventure education on social problems of youth. Since that time, I have been immersed in an action research process with colleagues aimed to develop effective school-based violence prevention programs (Meyer & Farrell, 1998), a process which recently resulted in our program, Responding in Peaceful and Positive Ways (RiPP), being identified as a Model program for dissemination by the US Department of Health and Human Services. Parallel to that process, I have worked with colleagues in the adventure field to brainstorm ideas for how to bridge violence prevention with outdoor adventure, and recently received funding for a small pilot that would examine the impact of a combined outdoor adventure/social cognitive program on violent behavior. The Crossing the Bridge pilot began in January. The focus of this presentation is to outline the issues we have been grappling with on the journey from developmental psychology toward the field of outdoor education, and to invite practitioners in outdoor adventure to join in this walk for the purpose of seeing how we might be able to collaboratively prevent youth violence and promote positive development. Examples for highlighting these issues are drawn from the action-research process used to develop, evaluate, and improve the RiPP program in urban and rural communities, as well as how that led to the current action-research process of developing the theoretical framework, program curriculum and research design for the Crossing the Bridge pilot.

THE AWARENESS ACTIVATION MODEL FOR TRANSFER OF LEARNING IN EXPERIENTIAL SETTINGS

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University of Utah

An individual applying her or his newfound knowledge and transferring the information, through action to a new setting is a valued outcome for experiential education practitioners. At the most basic level, the notion of transfer of knowledge appears so simple and commonsensical that it may only subconsciously serve as the focal point of initiative/rope course activities. Yet, transfer facilitated with intention may very well make any new knowledge acquired through experience more efficacious, applicable, and enduring for an individual.

Intentional facilitation, including isomorphic framing, may be the "trigger" that activates one's sense of mindfulness toward long-term use or even a disposition for application of knowledge developed through contrived settings to reality. The purpose of this paper is to present a model designed to intentionally increase the transference from initiative/ropes course activities to reality.

The base of the Awareness Activation Model (AAM) represents the foundational, perhaps subconscious, understanding that each participant has of her or his individual "self"—including knowledge of one's place in "real life" and one's role in the present activity. This knowledge serves as the basis for the entire experiential event. The activation cycle, building upon this foundation, parallels the traditional experiential learning cycle (experience, reflection, generalization, and application), but is dependent upon specific modifications from the facilitator.

The "Experience" (E^1) in this cycle is actually composed of each individual's own foundational life experience, as recalled through prompting from the facilitator ("How would you describe your 'real-life' self?" "Tell me about who you are at work/school/home.") rather than the experience of an individual event. The "Reflection" (R^1) that occurs next involves a comparison of how the individual has behaved during the experiential occasion (e.g., a day of initiatives, a backpacking trip, etc.) with how she or he typically behaves in "real life." This process is, again, prompted by the facilitator. ("How has your behavior here been different from/similar to that at work/school/home?"). Next, the "Generalization" (G^1) that occurs asks the individual to identify reasons *why* she or he has behaved differently/similarly in each setting ("What are some differences between your environment/atmosphere here and that at work/school/home?" "Why and in what ways do these differences matter?"). Finally, the setting in which "Application" (A^1) of this newly activated information occurs in the culminating experiential event itself, which is isomorphically framed appropriately for the population. As such, A^1 becomes the "Experience" (E) of the traditional experiential learning cycle, located at the top of the cylinder. The event is then facilitated and processed based upon its isomorphic frame.

The AAM represents a combination and modification of directly frontloading the experience and (isomorphically) framing the experience. This approach to processing is designed to increase participants' mindfulness of their "real lives" and the relationships between reality and the contrived experiential setting so that the learning from the experiential event can be more readily transferred.

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YOUTH DEVELOPMENT OUTCOMES OF THE CAMP EXPERIENCE: RESEARCH IN-PROCESS BY THE AMERICAN CAMPING ASSOCIATION

Dr. Marge Scanlin
Project Director

Understanding the Need

One of the greatest challenges in youth development is clearly identifying how schools, youth-serving agencies, camps, and others can each play an effective, complementary role in helping young people on their journey to productive adulthood. Positive youth development is an interrelated process that involves all of the influencing forces in a child's life, working together to build children's resilience to the stresses and challenges they encounter in the everyday world.

Defining Camp's Value

To address this need, The American Camping Association (ACA), in partnership with its accredited camps sponsored by religious denominations, youth serving agencies, municipalities, and independent owners, and Philliber Research Associates propose to conduct a first-of-its-kind national assessment of the impact of camps on American youth. This research project will do the following:

- Document the outcomes achieved by campers who participate in camp programs
- Determine the inputs/activities that camps use to create positive youth development experiences
- Analyze the strength of the relationship between the provision of inputs by the camp and the manifestation of the outcomes in campers
- Develop a validated tool individual camps can use to replicate appropriate parts of the study

Goal: Building Knowledge

The research will encompass 100 camps randomly selected from various strata of ACA's accredited camps. A total of at least 5000 campers will complete three sets of surveys in 2002/03. Several youth development outcomes will be measured through pre-, post-, and follow-up surveys of campers and their parents, staff observational checklists, and focus groups with a sample of participating camps. The outcomes under study include increased positive identity ; improved social skills; increased positive values; and learning new skills including cognitive, and psycho-motor skills .

Surveys and checklists have been tested for validity and reliability. A full field-test of the process was conducted at 21 camps during the summer of 2001.

Goal: Strengthening Capacity

By analyzing the degree of outcome achievement in each camp and evaluating the inputs or program elements provided in each camp, we will identify individual camps and program elements (staffing, training, program characteristics, etc.) that appear to be related to strong achievement of outcomes. ACA will study these top-performing camps in more detail to develop "Best Practices" information that will be the foundation of new training for the 21st century, including training for camp directors in establishing outcome-based program and training for camp staff in the achievement of outcomes.

A MULTIVARIATE MODEL OF ADVENTURE PROGRAM PERCEPTIONS

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Continued interest in program evaluation and improvement has led to calls for additional multivariate research, better measurement tools, and more complex research designs (Roberts & Yerkes, 2000; Ewert & Sibthorp, 2000). Through multivariate studies, researchers and practitioners can better discern which components of adventure programs have the greatest explanatory power regarding program outcomes, and which variables interact to facilitate or impede the learning of programmatic objectives.

Recently, new instrumentation has been developed to better address the needs of adventure education research and evaluation. The Life Effectiveness Questionnaire (LEQ) was designed to measure eight domains that are possible outcomes for adventure programs and can also be used as a global index of Life Effectiveness (Neill, Marsh, & Richards, 1997). The Characteristics of the Experience Scale was designed to measure the students' perceptions of their experiences during the course along five domains: including Personal Empowerment and Learning Relevance (Sibthorp, 2001). Additionally, predisposing factor such as attitude towards attendance, expectations for learning, gender, and age remain possible sources of variation (e.g., Ewert, 1988; Herbert, 1998).

METHODS

The sample for this study consisted of 190 participants on Broadreach adventure programs during the summer (June-August) of 2001. Self-selected participants completed a pretest of the LEQ approximately three weeks before arriving at their course locations. At this same time data were collected on predisposing factors such as expectations for learning and attitude towards attendance. This initial sample was 55% female and had a mean age of 15.8 years. After course completion, the students were administered the LEQ (as a posttest) and the CES. A path analysis using LISREL 8.5 was used to examine the hypothetical relationships between each of five observed variables.

RESULTS

Data were entered, cleaned, screened for univariate outliers, leaving a usable sample size of N=122. The model tested included five observed variables: expectations, perceptions of personal empowerment, perceptions of learning relevance, and the pre and posttest composite scores of the LEQ. Standardized path coefficients are reported in parentheses. The expectations variable significantly predicted both perceptions of personal empowerment (.24) and perceptions of learning relevance (.18). The LEQ pretest score (.39) and the perceptions of personal empowerment (.29) significantly predicted the LEQ posttest score. The hypothesized relationship between perceptions of learning relevance and the LEQ posttest score (.12) was not significant at $p < .05$. Overall, the model was acceptable but incomplete ($\chi 2 = 5.30$, df = 3, $p = .15$; RMSEA = .080).

DISCUSSION

The results support the importance of predisposing exceptions in the adventure experience (e.g., Ewert, 1988; Herbert, 1998), specifically that students with higher exceptions for learning hold more positive perceptions of both personal empowerment and learning relevance at course completion (as found by Sibthorp, 2001a). The developmental outcome measured by the LEQ at pretest was found to be significantly related to both the pretest LEQ score and the perceptions of personal empowerment on the course. This importance of student involvement in course decisions and responsibilities is a well-documented premise of outdoor experiential programs (e.g., Hastie, 1995; Schoel, Prouty, and Radcliffe, 1988). While additional research remains necessary to adequately assess which participant and program characteristics are most related to developmental outcomes, research such as this allows adventure education practitioners and researchers to better understand the complexities of the adventure experience.

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